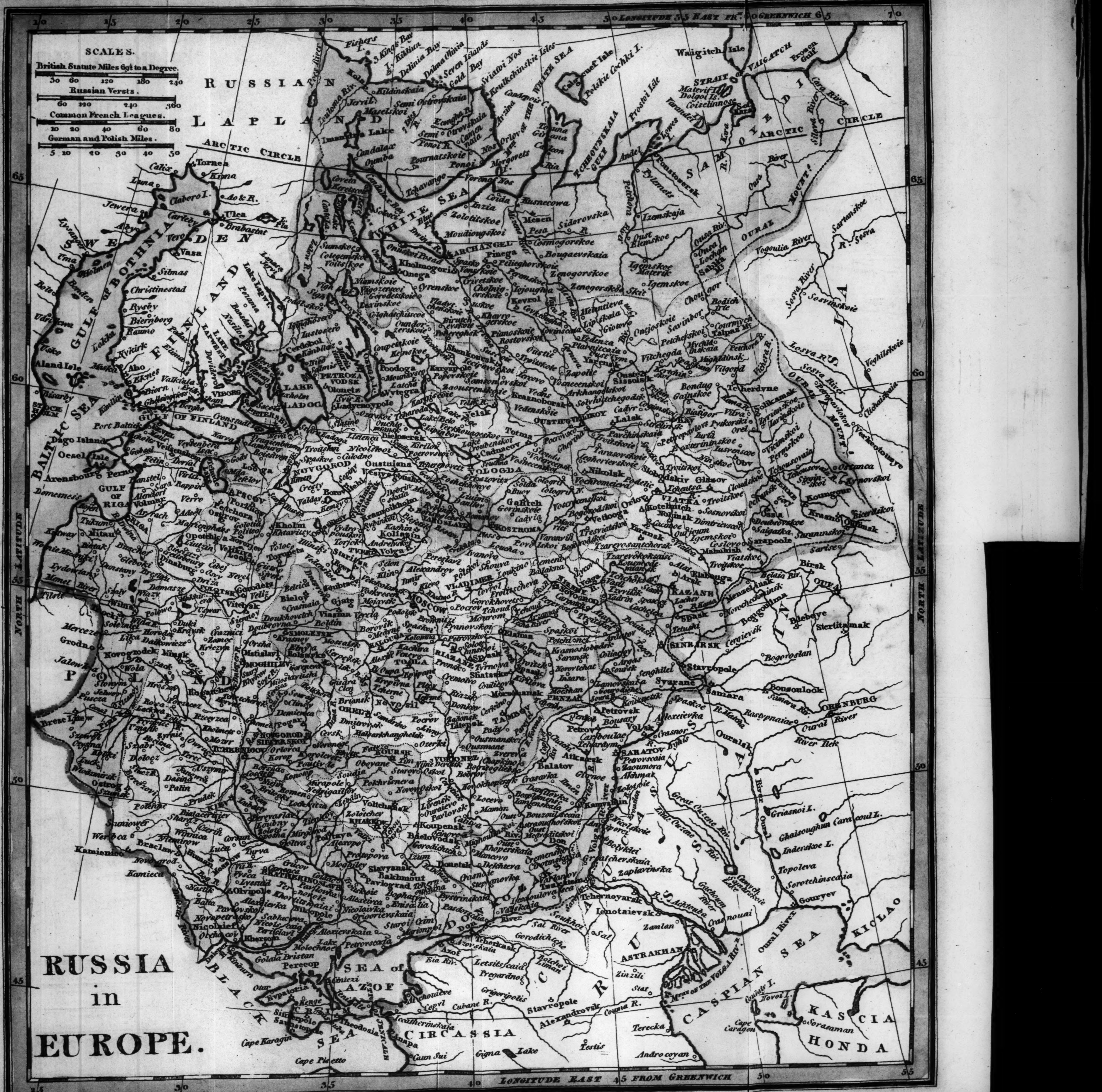

RUSSIA in EUROPE.

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AN

INTRODUCTION

TO THE STUDY OF

GEOGRAPHY;

10108.a.4.
1—4.

OR, A

GENERAL SURVEY

OF

EUROPE.

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BRITISH MUSEUM

INTRODUCTION
TO THE
STUDY
OF
GEOGRAPHY.

Of STATES *in general.*

CHAPTER I.

A State is an independent ſociety, conſiſting of ſeveral families, united for the ſupport and advancement of their common ſafety and welfare.

REMARKS.

1. *Beſides this general object of all States, every State has its particular intereſts.* Monteſquieu de l'Eſprit des Loix, *Part* ii. *L.* xi. *chap.* 5.

2. *There are ſome nations, who are ſtill without any form of government or polity. Among theſe a head of a family knows no ſuperior; however, on any emergency, ſeveral of theſe families elect a Commander in chief, as Mr.* Ellis, *an* Engliſh *gentleman, in his voyages, obſerves of the nations who inhabit the country bordering on* Hudſon's-Bay.

CHAP. II.

A State, governed by a ſingle Perſon, is called a Monarchy. This ſole ruler, however, is generally obliged to obſerve certain laws and conſtitutions; and then it is a limited Monarchy: But if he governs by his own arbitrary will, without being under the controll of any fundamental laws, it is called a Deſpotic Monarchy.

CHAP. III.

THE rulers of monarchical States are, for the moſt part, called either Emperors, or Kings. In *Europe* are three Emperors, and eleven Kings, ſome of whom are poſſeſſed of more than one kingdom. Among the Monarchical States, thoſe which are ſmalleſt give the title of King to their rulers.

CHAP. IV.

THOSE Princes, who govern their reſpective States in all caſes without the advice or aſſent of their ſubjects, are termed Unlimited Monarchs: And of theſe the moſt abſolute in *Europe*, are the Emperors of *Ruſſia* and *Turkey*, the Kings of *Denmark*, *Pruſſia* and *Sardinia*; and in an inferior degree the Kings of *France*, *Spain*, *Portugal*, and the two *Sicilies*. Thoſe Princes, to whom in very weighty concerns of the ſtate the concurrence of their ſubjects aſſent is neceſſary, are limited Monarchs; and ſuch are the Sovereigns in *Germany*, *Great-Britain*, *Sweden*, *Poland* and *Hungary*. Theſe laſt States are rather republican than monarchical, though they are generally reckoned among the latter.

CHAP. V.

THOSE ſubjects, whoſe conſent is required in the moſt important national concerns, are called the States of the kingdom, and generally conſiſt of the Clergy, the Nobility and the Repreſentatives of the cities; but in *Sweden*, the peaſants are alſo included in the States. Their aſſembly is called the Diet, or the Parliament.

CHAP. VI.

OF the Emperors and Kings, ſome are intitled to their dignity by hereditary right, as in *Portugal*, *Spain*, *France*, *Great Britain* *, *Denmark*, *Pruſſia*, and *Hungary*: Others obtain the ſovereignty by election, which is either limited to a certain houſe, as in *Sweden* and *Turkey*; or is arbitrary, as in *Germany* and *Poland*; but in *Ruſſia*, the Emperor appoints his ſucceſſor. In ſome kingdoms,

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* This hereditary right in *Great Britain* is not indefeaſible, but under certain reſtrictions.

doms, the crown is limited to males only, as in *Germany*, *France*, *Poland*, and *Turkey*; but in others, the throne is filled by females alſo, as in *Ruſſia*, *Denmark*, *Great-Britain*, *Spain*, *Portugal*, and *Hungary*.

CHAP. VII.

THE titles of Monarchs do not always imply the dominions, which they are in reality poſſeſſed of; but frequently what their anceſtors once held, or ſuch territories as they have any claim to. This is likewiſe applicable to their Arms, which are emblematic titles.

CHAP. VIII.

A State, governed by ſeveral perſons, is called a Republic. If the ſupreme power be lodged in the hands of a certain number, the common wealth is an Ariſtocracy *; but if it reſides in the people in general, ſuch a State is called a Democracy †.

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* From ἀριστευς a prince or noble, and κρατεω to govern.

† From Δημος the people, and κρατεω.

CHAP. IX.

REPUBLICS are either ſimple, as *Venice*, *Genoa*, and *Lucca*; or complex, *i. e.* forming one large State, by the union of ſeveral ſmaller Republics, as the Republics of the United Provinces, and of *Switzerland*.

CHAP. X.

Of MAPS.

THE firſt and moſt general knowledge of a State is acquired by Maps, the conſtruction of which has of late been greatly improved. We have now not only a general Map of every ſtate in *Europe*, but likewiſe of the ſeveral provinces which compoſe thoſe ſtates; and the latter are ſometimes bound up with the former. Such a collection is called an Atlas. In the choice of maps we are to be directed by their mathematical and hiſtorical accuracy, and the exact illumination or colouring of them. The maps publiſhed by *Homann* of *Nurenburgh* are the moſt valuable; being, from time to time, continually improved and corrected.

Of the NAMES *of the* European *States, and their principal cities, with the true method of pronouncing them.*

CHAP. XI.

THE origin of the names of ſome countries is obſcure and uncertain; but others, as may be demonſtrated, derive their Names from the *Aborigines* or ancient inhabitants, or from ſome powerful foreign nation, which came and ſettled in them; and others again have received their Names from their capital cities.

CHAP. XII.

THE vernacular Names of States generally undergo ſome change among foreigners; who ſometimes even ſubſtitute others in lieu of the real Names, as may be ſeen from the following inſtances.

I. DEUTSCHLAND, *or* TEUTSCHLAND,

Is by the Danes called *Tydskland*, by the Swedes *Tyskland*, by the French *Allemagne*, by the Spaniards *Alemania*, by the Engliſh *Germany*, by the Poles *Niemcy* and *Tedeſchi*, by the Hungarians *Nemet-Orſzag*, &c.

II. DANEMARK

Is by the Swedes called *Danmark*, by the French *Danemarc*, by the Engliſh *Denmark*, by the Germans *Dannemark*, by the Spaniards *Dinamarca*, by the Hungarians *Daniai-Orſzag*, &c.

III. NORGE

Is by the Danes likewiſe called by the ſame name, by the Swedes *Norige*, by the Germans *Norwegen*, by the Engliſh *Norway*, by the French *Norvegue*, by the Spaniards *Norvegia*, &c.

IV. SVERIGE, *or* SWERIGE,

Is by the Germans called *Schweden*, by the Engliſh *Sweden*, by the French *Suede*,

Suede, by the Spaniards *Seucia*, by the Italians *Suezia*, &c.

V. ESPAÑA

Is by the French called *L'Eſpagne*, by the Italians *Spagna*, by the Germans *Spanien*, by the Engliſh *Spain*, by the Poles *Hiſzpania*, &c.

VI. ENGLAND

Is by the Germans called *Engelland*, by the French *Angleterre*, by the Spaniards *Inglaterra*, by the Italians *Inghilterra*, &c.

CHAP. XIII.

AS it is of conſiderable uſe to travellers, &c. to know the right pronunciation of the Names of countries and cities, *i. e.* as they are pronounced by their reſpective inhabitants, I ſhall here ſet down ſome foreign names, with their true pronunciation, which may ſerve for a rule in pronouncing the reſt *.

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* I have endeavoured to accommodate theſe names as near as poſſible to the *Engliſh* pronunciation, as the author has to the *German*, and for the ſame obvious reaſon.

SPANISH NAMES.

Written.	Pronounced.
Eſpaña.	Eſpaniâ *.
Civdad.	Ciwdâd.
Civdadella.	Ciwdadella.
Mallorca.	Mâlliorcâ.
Valladolid.	Valiâdôlid.
Sevilla.	Sevilia.
Bilbao.	Vilvâo.
Badajoz.	Vâdâioſs.
Zaragoza.	Siâragoſsâ.
Murcia.	Moorciâ.
Iviça.	Iviſsâ.

ITALIAN NAMES.

Written.	Pronounced.
Genova.	Genooâ.
Giovenazzo.	Giovenatzo.
Correggio.	Corredgio.
Caſal Maggiore.	Câſâl Madgiorè.
Vigevano.	Vidgevâno.
Ronciglione.	Ronchilioné.
Sciara.	Shiârâ.
Sciglio.	Shillio.
Apuglia.	Apooliâ.

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* The â is pronounced like a in the word *all*, ô as in the word *omen*, and oo as in *food*.

Chiozza.	Kiotzâ.
Comacchio.	Comâckio.
Bocchetta.	Bokettâ
Lecce.	Letché.
Bracciano.	Bratchiâno.
Capaccio.	Capatchio.
Cervia.	* Cherviâ.
Civita Vecchia.	Chivitâ Veckia.
Pavia.	Pâvia.

FRENCH NAMES.

Written.	Pronounced.
Aix.	Aiz.
Bezançon.	Bezansôn.
Bourdeaux.	Boordo.
Lyon.	Leeông.
l'Orient.	Lôriâng.
Orleans.	Orlèâng.
Poitiers.	Pôitiè.
Rouen.	Rooân.
Rochelle.	Rôſhell.
Marſeilles †.	Marsêl.

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* The *ch* in all the Names in this column muſt be pronounced as in the *Engliſh* word *much.*

† The *Engliſh* names inſerted by the Author are omitted, and the names of places in *Germany*, which he omitted, are here inſerted in their place.

GERMAN NAMES.

Written.	Pronounced.
Wien.	Vien.
Leipzig.	Leipzigh.
Regensberg.	Regensbergh *.
Nurnberg.	Nurnbergh.
Colln.	Kelln.
Bräunſchweig,	Brounſhweigh †.
Aachen.	Aken.
Sachſen.	Sackſen ‡.
Schweidnitz.	Shweidnitz.
Pfaltz.	Faltz * *.
Oeſterriech.	Oſterreigh ‖.

DUTCH NAMES.

Written.	Pronounced.
Coevorden.	Cuvorden.
Utretcht.	Ootreckt.
Zutphen.	Sitfen.
Het Y, the bay on which *Amſterdam* is ſituated.	The *Ei.*

DANISH NAMES.

Written.	Pronounced.
Aalborg.	Olburg.

* or *Ratisbon.* † *Brunſwick.* ‡ *Saxony.*
* * The *Palatinate.* ‖ *Auſtria.*

Aarhuus.	Ohrhooſe.
Anderſchow.	Anderskaw.

SWEDISH NAMES.

Written.	Pronounced.
Abo.	Obo.
Waſteras.	Veſterôs.
Skane.	Skone.

RUSSIAN NAMES.

Written.	Pronounced.
Wyſznei Woloczok.	Viſhni Volotſhok.
Szuia.	Shwia.
Uglicz.	Ooglitſh.
Opoczka.	Opotſhka.
Olonec.	Olônetz.
Torzzok.	Torſhock.
Mezen.	Meſen.

POLISH NAMES.

Written.	Pronounced.
Wyſzogrod.	Viſhogrod.
Czersk.	Chersk.
Lenczycz.	Lenchitſh.
Polock.	Polosk.
Poznan.	Poſnan.

BOHEMIAN NAMES.

Written.	Pronounced.
Byſzice.	Byſhitz.
Czaſlaw.	Chaſlaw.

The pronunciation of theſe words is like that of the *Poliſh* and *Ruſſian* names.

HUNGARIAN NAMES.

Written.	Pronounced.
Sar-var.	Sharfar.
Szolnok.	Sholnok.
Cſanad.	Chanad.
Panczova.	Panchowa.
Beſztercze.	Beſtertſè.
Tſetnek.	Chetnek.
Zeben.	Seben.
Uj-var.	Oogh-var.

CHAP. XIV.

HISTORY.

THE origin and revolutions of States are beſt learned from the particular Hiſtory of every country; and of theſe, it is neceſſary to know which are moſt in repute, and will furniſh the reader with the moſt uſeful obſervations.

CHAP. XV.

SITUATION.

THE ſhorteſt and eaſieſt method of acquiring a competent knowledge of the ſituation of a Kingdom or State, is to conſult good maps. The ſituation of a country has alſo a great influence on its conſtitution, and the relation it bears to other States.

CHAP. XVI.

EXTENT.

THE extent of a State cannot be determined with any accuracy from the poſt-roads (a): Neither does the admeaſurement of its greateſt length and breadth afford any preciſe idea of its extent (b). But the beſt way to arrive at this particular is to reduce a country into one or more ſquares, according to the beſt maps; and then to compute the ſuperficial contents of the whole in geographical miles (c). This operation will give the area of a State in ſquare miles; which may be uſefully applied to ſeveral purpoſes (d).

REMARKS.

(a) *The poſt-roads do not lie in a direct line; ſo that we may exactly know the diſtance of two places, lying on the oppoſite extremities of a country, according to the ſtages or roads, without having a true idea of the area of it. Beſides, a more accurate and uniform menſuration of roads with a proper machine is much wanted. In all* Europe *there is but one extenſive State where the main roads are meaſured with preciſion, and mile ſtones directing travellers to every part of the Empire, erected; and that is* Ruſſia, *which is the largeſt State not only* in Europe, *but in the whole world.*

(b) *Moſt Kingdoms or States are of an irregular form, and the length and breadth of them vary in different places.*

(c) *Sixty Geographical* Engliſh *miles, which we ſhall make uſe of in this tranſlation, conſtitute a degree on the Equator; and one of theſe miles is equal to* 6111

Engliſh *feet, but is leſs than a ſtatute mile.*

(d) *For inſtance, a more exact compariſon may be made of different States, with regard to their extent, cultivation, and populouſneſs; and ſuch a compariſon affords matter for many important obſervations.*

CHAP. XVII.

IN order to exhibit at one view, the proportion which the ſeveral *European* States bear to each other, according to their extent, I ſhall here ſet down the area of each of them in ſquare geographical miles, from exact menſurations in the beſt maps.

	Square *Engliſh* Miles.
The *European* part of the *Ruſſian* empire contains about	230,400
The whole empire of *Ruſſia* at leaſt	800,000
Poland and *Lithuania*	51,600
Sweden and *Finland*	51,200
Germany	44,944
The *German* empire, with what remains of the Circle of *Burgundy* included, but excluſive of *Sileſia*	45,512

	Square *Engliſh* Miles.
Turkey in *Europe*, with the Peninſula of the *Crimea*	42,176
France	40,000
All the dominions taken together, which the Houſe of *Auſtria* was poſſeſſed of at the beginning of the year 1758	35,200
Spain	34,000
All the King of *Denmark*'s dominions aggregately	25,100
Great-Britain and *Ireland*	24,000
Norway taken ſeparately	21,000
Hungary, *Tranſilvania*, and *Slavonia*, with the *Auſtrian* part of *Croatia* and *Dalmatia*	19,040
The *Auſtrian* territories in *Germany*	13,540
All the dominions which the King of *Pruſſia* was poſſeſſed of at the beginning of the year 1758, taken together	11,760
Portugal	7500
Naples and *Sicily*	7344
The King of *Sardinia*'s dominions	4896

Switzerland

Switzerland	4360
Denmark alone	3400
The Eccleſiaſtical State	3200
The kingdom of *Pruſſia*	2916
The *United Provinces*	2500
The *Venetian* territories in the north of *Italy*	2500
The Great Dutchy of *Tuſcany*	1760
Genoa and *Corſica*	1160
The Duke of *Modena*'s territories	360
The Infant Don *Philip*'s territories	360

CHAP. XVIII.

AIR.

THE air and weather differ extremely in *Europe*, as they do in other parts of the world, not only by reaſon of the different Climates (a), but likewiſe on account of the ſituation (b), and natural qualities (c), of the particular ſoils and countries (d). As the temperature of the air has a great influence on the bodies, and the manner of living, of the inhabitants of every country (e); it may be worth our notice to obſerve the effects of it in the ſeveral States of *Europe*. However, we ſhould be the more on our guard againſt miſtakes in this particular, as ſuch errors may be eaſily committed (f.)

REMARKS.

(a) *In the Northern and North-eaſtern parts of* Europe, *the winter muſt naturally be longer and more ſevere than in the Southern parts. Let* Spain *and* Portugal *be compared with* Norway *and* Sweden, *in this particular.*

(b) *In a country which borders on the ſea, or that is entirely ſurrounded with it, the air is denſer, and the weather more variable, than in countries that lie remote from the ſea. But in the former, at leaſt in the maritime parts of it, the winter is milder than in the latter, as appears by comparing* England *with* Germany.

(c) *The temperature of the air, and the weather, are very different in level and mountainous countries. The latter are colder than the former; but the air in a hilly country is purer, and conſequently more healthy, than in a plain country, eſpecially*

cially if there be many moraſſes in the latter. The higheſt mountains in the middle of Europe, *as the* Alps, *and among theſe particularly the* Glatſcher *in* Switzerland, *and likewiſe the lofty mountains in* Tyrol *and* Carniola, *are continually covered with ſnow, as well as the mountains in the moſt northern parts of* Europe.

(d) *An inſtance of this may be ſeen in the mountainous part of* Hungary, *where the air is much more pure and healthy than in the level part, eſpecially the plain that is watered by the* Theis. *The like advantage have the middle and eaſtern parts of* Norway, *over the weſtern,* &c. *How different is the air in various parts of* Germany!

(e) *This influence is undeniable, and amounts to a demonſtration; but how far the effects of it extend, and whether, and how far, the ſeveral characters of nations are dependent on it, is not ſo evident, or ſo preciſely determined, as many by reading that moſt ingenious work* L'Eſprit des Loix [Part III. L. 14. C. 2.] *may imagine.*

(f) Theſe miſtakes are principally the following:

It is an error to ſuppoſe 1. *That in countries, and towns lying under the ſame Parallel the heat and cold is alike: for experience ſhews that the Eaſtern countries and cities of* Europe *are much colder than the Weſtern lying under the ſame Parallel. Thus the cold increaſes not only with the degrees of Latitude, but likewiſe with the degrees of eaſtern Longitude.*

2. *That the temperature of the air, and the weather, in the Northern countries is not only very ſharp, diſagreeable, and unhealthy, but ſo cold as to be intolerable. The latter ſuppoſition is confuted by the health and longevity of the inhabitants. The cold in winter is not leſs tolerable to the Northern, than the heat to the Southern nations; beſides, the ſummer is pleaſanter to the former than to the latter.*

3. *That the heat in ſummer in the moſt Southern parts of* Europe *muſt be more intenſe than in the more Northern parts, becauſe the former lie nearer the Equator; whereas the length of the ſummer-days in the latter often occaſions the contrary effect.*

4. *That maritime countries, and cities lying on the ſea, are very unhealthy; whereas the air is there well purified by the freſh gales that frequently blow from the ſea.*

CHAP. XIX.

NATURAL QUALITY.

NO country in *Europe* of any conſiderable extent is altogether level, but is at leaſt interſperſed with a great number of eminencies; and thoſe countries in which there is a ſucceſſion of hills, valleys, and plains, have many advantages which level countries do not enjoy (a). But thoſe countries which are very mountainous are not the moſt fertile or commodious.

REMARK.

(a) *Theſe are, a purer air, plenty of good ſprings, a greater number of rivers, more extenſive woods, richer mines and more in number, and, laſtly, more delightful proſpects.*

CHAP.

CHAP. XX.

MANY rivers, and eſpecially thoſe that are navigable, are of great benefit to a country, both by watering the ſoil, and for the conveniency of its trade. It is well worth the labour and expence, where there are no great rivers, or but few, to ſupply that deficiency with navigable canals. Of theſe canals no country affords ſo many as the *Netherlands*; but the longeſt of any in *Europe* are the canals of *Languedoc* in *France*, and that of *Ladoga* in *Ruſſia*.

CHAP. XXI.

THERE is not one among all the countries of *Europe*, the ſoil of which, in all its provinces, is equally fertile. But ſome have greater natural advantages than others, with reſpect to the goodneſs of the ſoil; though by the induſtry of the inhabitants of the one, and the ſloth and ſupineneſs of the inhabitants of the other, they are brought nearly to an equality in this point. Hence a State which has but an indifferent ſoil, if the inhabitants are free and induſtrious (a), generally enjoys more plenty, and greater riches (b), than a State with a ſoil that is naturally fruitful; the inhabitants of which, partly on account of the fertility of the ſoil, and partly through civil and eccleſiaſtical tyranny, give themſelves up to ſloth (c).

REMARKS.

(a) *The barrenneſs of a country is a natural motive to induce the inhabitants to be as induſtrious as poſſible, and likewiſe inclines them to frugality and temperance; whereas, on the contrary, a fertile country is an inducement to ſloth, the earth, with little labour or culture, yielding as much proviſion,* &c. *as is neceſſary for the ſupport of life.*

(b) *For inſtance,* Holland *and* Genoa.

(c) Portugal, Spain, *the* Eccleſiaſtical State, *and* Poland, *are melancholy inſtances of this, and ſerve to ſhew how little a fertile ſoil, without induſtry and liberty, conduces to the power and wealth of a State.*

CHAP. XXII.

Of ARABLE LAND *and* PASTURAGE.

AGriculture and feeding of cattle are the moſt ancient, natural, and general means of ſubſiſtence (a); and when both are carried on in a State with all poſſible induſtry, and arable land and paſturage bear a due proportion to each other (b), they not only afford the inhabitants a certain ſubſiſtence, but likewiſe are the funds for carrying on a profitable trade.

REMARKS.

(a) *Graſing is more neceſſary than tillage; and even in the moſt northern parts and mountainous countries of* Europe, *the inhabitants, live entirely by feeding of cattle, fiſhing, and hunting, without practiſing tillage: on the contrary, agriculture cannot ſubſiſt without feeding of cattle; however, the former is the more profitable employment.*

(b) *Arable lands muſt not be increaſed to the detriment of paſturage.*

CHAP. XXIII.

AGriculture is carried to a higher pitch in *England*, than in any country in *Europe*, and, I may ſay, in the whole world; accordingly that country has the greateſt ſuperfluity of grain (a). The other *European* countries, which produce ſuch plenty of corn as to be able to export great quantities, are, *Livonia* (b), *Poland* (c) and *Lithuania* (d), *Pruſſia* (e), *Germany* (f), *Denmark* (g), and *Sicily* (h). Other countries produce a ſufficient quantity of grain for the ſubſiſtence of the inhabitants, but, for want of granaries, ſometimes labour under a ſcarcity. Some countries are in a continual want of corn; which is cauſed either by the ſterility of the ſoil, as in *Norway* (i), *Sweden* (k), and ſome others; or ariſes from a neglect of agriculture, as in *Spain* and *Portugal*.

REMARKS.

(a) *The cauſe of this ſeems to be the bounty allowed in* England *to encourage the exportation of corn; but it muſt be ex-*

ported

ported in Britiſh *bottoms, which are to be navigated by* Britiſh *ſailors. Within five years,* viz. *from* 1746 *to* 1750 *, *the value of the different kinds of grain and malt exported from* England *amounted to* 41,657,546 *Rixdollars* †; *ſo that the annual exportation during thoſe years, amounted to* 8,551,509 *Rixdollars.* See ‘ Dangueil’s *obſervations on the advantages* ‘ *and diſadvantages of* France *and* Great-‘ Britain, *with regard to trade.*’

(b) *This country is called the Granary of the North.*

(c) *The ſurplus of corn that grows in* Poland *is ſent to* Dantzic, *for further exportation. The quantity thus annually exported is about* 60,000 *laſts, which may be valued at about two millions and a half of Rixdollars. A laſt of corn is* 10 *quarters, or* 80 *buſhels.*

(d) (e) *The ſurplus of corn growing in the Great Dutchy of* Lithuania *is ſent to* Konigsberg *and* Memel. *The annual exportation of* Lithuanian *and* Pruſſian *corn from* Konigsberg *amounts to* 20,000 *laſts.*

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* One of theſe years muſt be included; but the Author does not tell us which.

† A Rixdollar is equal to 3 *s.* 6 *d. ſterling.*

(f) *The greateſt part of the corn exported from* Germany *is carried down the* Elbe *and the* Weſer, *to* Hamburg, Bremen, *and other ports in the* Baltic; *and from thence it is exported to* Holland, Sweden, *and other countries. Corn is likewiſe ſent from* Germany *to* Switzerland.

(g) *Corn is exported from* Denmark, *in a plentiful year, chiefly to the ſouthern parts of* Norway.

(h) *This iſland was the granary of the ancient* Romans; *and, at preſent, ſupplies the kingdom of* Naples *with conſiderable quantities of corn.*

(i) *This often happens in* France; *but the ſcarcity of corn, which that country ſometimes labours under, may be derived from other concurrent cauſes.* See Dangueil'*s Obſervations*, &c. *The difficulties which* Sweden *labours under from the want of granaries, are taken notice of by M.* Sven Bring, *in his* Diſſertatio de felicitate regni Svio-Gothici, arte magìs quàm Marte parandâ, *Londini*, *Goth.* 1756, 1756, *p.* 41, 42. *The* Pruſſian *territories are well provided with granaries.*

(k) *In* Norway *and* Sweden, *bread is made of the rind of fir-trees, chaff, and certain roots, as a reſource in time of ſcarcity.*

CHAP. XXIV.

Of the SPECIES *of* GRAIN.

THE different ſorts of grain (taking the word in the moſt extenſive ſignification) cultivated in *Europe*, but not in all parts of it, are, wheat, rye, turkey wheat (a), barley, oats, peaſe, beans, vetches, lentils, millet, rice (b), buckwheat, *&c.*

REMARKS.

(a) *This is very common in* Piedmont *and the* Milaneſe.

(b) *Rice is ſown only in few countries of* Europe, *namely*, Spain, Naples, *the* Milaneſe, *the* Veroneſe, *and* Romania *in* Turkey. *But the places where it grows are unhealthy. See* Keyſler's *Travels*,

vels, vol. I. *p.* 202 * *of the* Engliſh *tranſlation. This is an argument againſt the advantage of cultivating rice, recommended by M.* Monteſquieu *in his* Eſprit des Loix, *Part* iii. *liv.* 23. *chap.* 14.

CHAP. XXV.

Of the VINE.

THE Vine was certainly tranſplanted from *Aſia* to *Europe*. It was firſt brought into *Greece:* From thence it was tranſplanted into *Italy*, and the *Roman* province called *Gallia Narbonenſis*; and from thoſe countries it was propagated into other parts of *Europe* (a). The countries that produce wine are properly, thoſe that lie within the fiftieth degree of latitude (b): For though the Vine grows in ſome ſpots beyond that Parallel; and particularly in ſome countries in *Germany*, where they make wine (c); However, it is not to be compared either in goodneſs or quantity with the wine produced in the ſouthern parts of *Europe*. Dried grapes are called Raiſins. Vineyards occupy and ſupport a much greater number of hands than even agriculture (d). Conſequently the Vine contributes much towards peopling a country, and is a fund for a profitable trade (e).

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* The *Engliſh* tranſlation was publiſhed at *London* in 4to, 1756, for *A. Linde.*

REMARKS.

(a) *Vide* Journal Helvetique, October, 1738. *p.* 291. Hamburg *Magazine, vol.* v. *p.* 639.

(b) *Conſequently, theſe are* Portugal, Spain, France, Switzerland, Italy, Hungary, Greece, *and the ſouthern half of* Germany.

(c) *In the lower part of the Archbiſhoprics of* Triers *and* Cologne, *the County of* Hanau, *the moſt northern part of* Bohemia, Sileſia, Luſatia, *and* Upper Saxony.

(d) *One* French *league of arable land will employ and ſupport no more than* 1390 *peaſants; whereas a league of vineyard will maintain* 2604 *perſons.* Diſcours ſur les vignes. *Dijon.* 1756, 12*mo. It has been apprehended in* France, *that cultivating the vine might prove detrimental to tillage, and endeavours have been uſed for*

for limiting the former. But if the Peaſants could diſpoſe of their corn as eaſily as they do their wine, and were ſure that it would turn to as good an account, the latter would naturally bear a due proportion to the former.

(e) *Wine and raiſins, to the amount of ſome millions of Rixdollars, are exported from* Spain, *and to the value of three or four millions from* France: *The wine exported from* Germany, Hungary, *and other wine countries, alſo amounts to ſeveral millions of Dollars.*

CHAP. XXVI.

Of FRUIT.

IT is well known, that the beſt fruit-trees were tranſplanted into the countries where they now grow, from *Italy*, whither they were originally brought from *Greece*, *Aſia*, and *Africa*. For inſtance, apricots were brought from *Epirus*; the choiceſt pears from *Alexandria*, *Numidia*, and *Greece*; lemons, citrons, and oranges from *Media*, *Perſia*, and *Aſſyria*; figs and pomgranates from *Carthage*; cheſnuts from *Caſtania* in *Magneſia*, a diſtrict belonging to *Macedonia*; cherries from *Cereſunt* in *Pontus*; peaches from *Perſia*; plumbs from *Armenia* and *Syria* (a). Theſe fruits, as well as almonds and olives (b), are in the greateſt plenty and perfection in *Italy*, in the adjacent parts of the *German* Empire, and in *France*, *Spain*, and *Portugal*, where they conſtitute no inconſiderable articles of trade. The Mulberry tree is of great importance, not ſo much for the deliciouſneſs of its fruit, as for its leaves, which are the beſt nutriment for ſilk-worms. Some *European* countries, as *England* and *Normandy* in *France*, have ſuch a great plenty of apples and pears, as to make two kinds of vinous liquors of them. Towards the north, fruit decreaſes both in quantity and quality; and in the moſt northern part of *Europe*, no fruit-trees are to be found.

REMARKS.

(a) *Vide* Hamburg Magazine, *Vol.* V. p. 483. Journal Helvetique, Sept. 1740.

(b) *The Oil expreſſed from Olives is a great article of trade in theſe countries. The beſt oil comes from St.* Remo *and* Provence.

CHAP. XXVII.

Of WOOD *for* FUEL *and* TIMBER.

THOUGH a ſufficient plenty of good Fuel-wood and Timber be a very important article to a country (a), a very great waſte of wood has been made in all parts (b). Some countries have not a ſufficient quantity of wood for theſe purpoſes (c); and others, which have ſtill a ſufficiency of wood, or more, in few ages will be in danger of wanting it for neceſſary conſumption; unleſs they are better oeconomiſts, or apply themſelves to planting more than they have hitherto done. The chief wood for timber is oak (d), and fir (e); and theſe thrive better in the Northern half of *Europe* than in the Southern (f). In theſe kinds of timber, the greateſt trade is carried on by *Norway* (g), *Sweden*, *Ruſſia* (h), *Pruſſia*, *Poland*, *Lithuania*, *Courland* (i), and thoſe parts of *Germany*

many which lie near the *Baltic* (k), The moſt northern parts of *Europe* produce no ſpecies of trees; which makes it the more remarkable, and worthy our obſervation to enquire, from whence comes the multitude of larch and fir-trees that are thrown on ſhore by the *North-ſea* and the *Frozen Ocean* (l)?

REMARKS.

(a) *Not to mention the aſtoniſhing quantity of wood neceſſary for common fuel, it is not to be conceived how much is required for building houſes, fortifications and ſhips, and the vaſt quantities conſumed in mines, ſmelting-houſes, forges, ſalt and glaſs-houſes*, &c.

(b) *Wood-lands have been conſiderably diminiſhed by the increaſe of agriculture; for a prodigious number of woods has been cut down, and the land cultivated and plowed; arable land yielding a greater profit than woods. However, the extreme inconveniences attending the want of a ſufficient quantity of wood ſhould have been attended to, before ſo many extenſive woods were deſtroyed. The indiſcreet practice of uſing wood in many caſes where ſtone would*

would have done as well, and perhaps better, and the profuſeneſs in burning it, &c. *tend alſo to diminiſh this uſeful material conſiderably. In* Sweden *and* Norway, *an incredible number of trees are annually conſumed merely for the aſhes, or as a manure for land; but this is certainly a pernicious practice. In ſome parts of* Germany, *as in the County of* Marc, *at* Plettenberg, *in* Swabia, *the* Black-foreſt, Franconia, *and in the County of* Erbach, *they have ſuch an abſurd cuſtom, but ſomething leſs detrimental than that practiſed in* Sweden *and* Norway.

(c) *In* Germany, *wood within a century is become ſix, eight or ten times dearer than heretofore; and in ſome parts there is a great ſcarcity of it.* England, *and part of* Denmark, *have but little wood.* Holland *has ſtill leſs; ſo that the wood imported thither by ſhipping is ſometimes ſold by weight. The marſh-lands near the* German Ocean *and the* Elb, *and the iſlands near the main land of the Dutchy of* Sleſwick, *naturally produce no wood. In theſe and other countries deſtitute of wood, they burn either turf, pit-coal, or ſtraw and ſtubble, for fuel.*

In the iſlands near the Dutchy of Sleſwick, *mentioned above, dried cow-dung ſerves for fuel, and in* Iceland *they burn even fiſh-bones.*

(d) *Oak is uſed for building houſes and ſhips, and the acorns it produces ſerve for feeding ſwine; but in* Spain *they are ſo ſweet and palatable, that the peaſants eat them. Bark of oak is uſed in tanning hides. Of burnt oak is made wood-aſh, which, though it be not very different from pot-aſh, yet muſt not be confounded with it; the latter being the aſhes of burnt vegetables.*

(e) *The fir-tree is uſed for maſts, beams, planks, laths, and charcoal; and its reſinous root, being burnt, yields pitch and tar. Pine trees ſerve for the ſame purpoſes as firs; but are neither ſo tough nor ſo full of reſin.*

(f) *The beſt oaks are thoſe of* Denmark; *but they are now grown ſcarce. Next to theſe are the* Swediſh *and* Norway *oaks,* &c. *The firs which grow in theſe northern countries are likewiſe better than thoſe of the ſouthern parts of* Europe; *and as the former are preferable to the latter for uſe, they fetch a higher price.* Vide Pontoppidan's Natural Hiſtory of Norway,

way, *Part* I. *p.* 143, *of the* Engliſh *tranſlation* *.

(g) *The quantity of fir timber annually exported from* Norway *is computed at above a million of rixdollars* †; *Maſts of ſhips are frequently ſold for* 100, 150 *or* 200 *rixdollars.* Pontoppidan's Nat. Hiſt. *of* Norway, *Part* I. *p.* 142.

(h) *No wood is allowed to be exported from* Narva; *but at* Riga *and* Pernau, *it is ſhipped off ready wrought into all kinds of utenſils.*

(i) *The trade carried on by* Pruſſia, Lithuania, *and* Poland, *in timber, pitch, tar and wood-aſh, is very conſiderable. Timber is alſo exported from* Courland, *particularly from the town of* Libau.

(k) *From* Stettin *in* Pomerania *was exported, in the year* 1756, *timber to the value of* 246,053 *rixdollars. Great quantities of timber are alſo ſent from* Germany *in floats down the* Rhine, *the* Elbe, *and the* Weſer.

(l) *Vide* Gmelin's *Travels through* Siberia. *Vol.* II. *p.* 415.

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* This tranſlation was printed at *London* in the year 1755, for *A. Linde.*

† A rixdollar is equal to 3*s.* 6*d.* ſterling.

CHAP.

CHAP. XXVIII.

Of FLAX *and* HEMP.

FLAX and Hemp are alſo reckoned among the chief natural products of a country; for as they are the neceſſary materials for carrying on ſeveral manufactures, the culture of them is very profitable. From *Livonia* and *Courland* lin-ſeed is ſent all over *Europe* (a). Conſiderable quantities of hemp-ſeed and lin-ſeed are alſo exported from the *Great Dutchy of Lithuania* (b). Thoſe countries (c), together with *Ruſſia*, *Germany* (d), ſome parts of *France* (e), *Brabant*, and *Flanders* (f) chiefly cultivate Flax, and ſometimes a great deal of Hemp (g); and with the ſuperfluity which they have of both theſe commodities, they carry on a conſiderable trade.

REMARKS.

(a) *It is thought, that the great demand for the lin-ſeed of theſe countries ariſes from the advantage of ſowing it in the ſouthern parts of* Europe; *it being found by experience, that the lin-*

ſeed brought from a cold country, when ſown in a warm climate, produces the fineſt flax. Hamburg Mag. *Vol.* VII. *p.* 73. *Vol.* VIII. *p.* 198, 199. *But lin-ſeed of equal goodneſs might be produced in* Germany, *and probably in other countries, were the ſeed only left to ripen throughly, and to lye a year in the bolls before they are ſown.*

(b) *They are brought to* Konigsberg, *and* Memel, *and there ſhipped for foreign countries.*

(c) *From* Riga *in particular* 40,000 *ſhip pounds of hemp are exported annually. A Ship pound is* 400 *pounds avoir-du-poiſe weight.*

(d) *Flax is not only cultivated, but alſo manufactured in* Germany.

(e) *As* French Flanders, Picardy, Bretagne, Maine, Dauphiné *and* Alſace.

(f) *It conſtitutes the chief wealth of theſe countries.*

(g) *A great quantity of very good Hemp grows in* Italy, *particularly in the* Bologneſe.

CHAP. XXIX.

Of TOBACCO.

THE immenſe trade carried on in Tobacco makes the cultivation of it very advantageous. Moſt of the Tobacco conſumed in *Europe* is brought from *America*, where it was originally produced (a). However, it is planted in ſeveral *European* countries, with good ſucceſs (b); and great ſums of money are ſaved, and conſiderable profits acquired, by the cultivation of this plant.

REMARKS.

(a) *The* Americans *that live on the continent call it* Petun, *and the iſlanders give it the name of* Yoli, *but the word Tobacco was firſt introduced by the* Spaniards. *Thoſe* European *nations who have colonies in* America, *plant tobacco there, and import ſeveral hundred thouſand quintals annually, to* Europe.

(b) *As in* Germany, Sweden, Denmark, Hungary, *and* France, *namely, in ſome parts of the province of* Guienne.

CHAP.

CHAP. XXX.

Of MADDER.

MADDER called in Latin *Rubia Tinctoria*, by the Germans *Farberrothe*, *Krapp* or *Grapp*, and by the French *Garence*, is a red plant; which, being dried and pulveriſed is very much uſed in dying woollen cloth. No colour is in ſuch general uſe; for it is not only the chief ingredient in dying red, but likewiſe brown and yellow; and by the addition of various minerals, all other colours may be prepared from it. It is chiefly cultivated in *Zealand*, one of the United Provinces, in *Flanders*, ſome parts of *Germany* and *Italy*, and of late has been planted in *Sweden*. It is the fund of a conſiderable trade (a).

WOAD, in Latin *Iſatis* *, by the Germans called *Waid*, by the French *Paſtel*, *Gueſde*, and *Vovede*, is alſo a very profitable herb, which being pulveriſed and made into balls or cakes, is uſed as a blue dye. This plant is cultivated in *France*, namely, in *Upper Langue-*

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* *Glaſtum* is the proper *Latin* name of this herb. *vide Plin.* 22. 1.

doc, and the environs of *Caen* in *Normandy*; in *Somerſetſhire* in *England*; about *Geneva* in *Switzerland*; in *Thuringia*, the Dutchy of *Juliers*, and the *Marc*, in *Germany*; in *Spain* and *Portugal*; and now alſo in *Sweden*. The vaſt quantities of *Indigo* brought over from *America* have been a great detriment to to the Woad trade (b).

REMARKS.

(a) *A hundred weight of neat* Zealand *Madder is ſold at* Amſterdam *from* 25 *to* 32 *Guilders* *. *Vide* Dictionaire Univerſelle de Commerce par M. Savary. T. III. p. 621, *of the* Geneva *edition printed in* 1750.

(b) *See* Savary's Dict. Univerſ. du Commerce. T. III. p. 70.

CHAP. XXXI.

Of SAFFRON.

THE culture of Saffron is likewiſe extremely profitable. This plant is produced from a root, and bears a blue flower ſomewhat reſembling a lily, but no bigger than a ſmall tulip. The *piſtillum* of this flower, which conſiſts of reddiſh filaments ſpotted with a deep yellow, being taken out, dried and preſſed into cakes, is the ſaffron (a). It grows in moſt *European* countries; *viz. Portugal*, *Spain* (b), *France* (c), *Italy*, (d), *England*, (e), *Ireland*, *Germany*, (f), *Hungary*, and *Turkey*.

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* A *Holland* guilder is equal to 1*s.* 9*d.* ſterling.

REMARKS.

(a) *Vid.* Savary's Dictionary T. III. p. 727.

(b) *The* Spaniards *ſpoil their Saffron by moiſtening it with oil.*

(c) *The beſt* French *Saffron grows in the* Gatinois, *and a pound of it ſells at* Amſterdam *for* 18 *or* 19 *Guilders. It alſo grows in the provinces of* Guienne, Languedoc, Provence, Orange, Normandy, *and about* Avignon.

(d) *Chiefly in the kingdom of* Naples, *and in* Sicily.

(e) *Particularly in* Cambridgeſhire *and* Eſſex. *The* Cambridgeſhire *Saffron is the beſt in* Europe, *or indeed in the world; and a pound of it is worth nine rixdollars. Vide* G. W. Alberti's Letters on the ſtate of Religion and the Sciences in Great-Britain, p. 923.

(f) *The Saffron which grows in* Lower-Auſtria, *near the* Danube, *is ſome of the beſt ſort.* Bohemia, Moravia, *and ſeveral other countries alſo produce Saffron.*

CHAP. XXXII.

Of KELP *and* POT-ASH.

THE herb Kali or glaſs-wort ſhoots up in a ſtem about eighteen inches high, with ſeveral knots, out of which grow ſeveral ſmall leaves. Theſe when grown to their proper ſize, are cut off and dried like hay. Then they are put into large pits and burned to an aſh, which, after ſome time, cakes together, and becomes as hard as a ſtone. It is called in Engliſh *Kelp*, in German *Sode* (a) and in French *Soude*, is uſed in making the fineſt cryſtal glaſs and ſoap, and in bleaching linen. The beſt Kelp comes from *Spain*, and is exported in ruſh frails. Pot-aſh is likewiſe the aſhes of dried vegetables burnt, and is made in ſeveral parts of *Europe*.

REMARKS.

(a) Vide Theorie et Pratique du Commerce, par M. Uſtariz. p. 383. Savary's Dict. *in the article* Soude.

CHAP. XXXIII.

Of the SUGAR CANE.

THE Sugar-cane is not much cultivated in *Europe*; *Spain* (a), and *Italy* (b), being the only countries where it is planted. The juice is expreſſed by grinding the Cane; after which, it is boiled ſeveral times till it comes to a proper conſiſtency. Then it is caſt into moulds, and after that refined ſeveral ways. Of the juice which oozes out of the moulds, a ſpirituous liquor is diſtilled.

REMARKS.

(a) *In* Granada, Andaluſia, Murcia, *and* Valencia.

(b) *Namely, in the Kingdom of* Naples, *and the iſland of* Sicily.

CHAP. XXXIV.

Of COTTON.

THE Cotton-tree (a) is but little known in *Europe*. The countries where it grows is the diſtrict of *Ecija* in *Spain*, in *Theſſaly*, and ſome of the iſlands in the *Mediterranean* and the *Archipelago*, as *Santorino*, *Thermia*, and *Syra*. The fruit in which the Cotton is incloſed is an oval ſhell of the bigneſs of a Wall-nut, which is burſt by the Cotton within it when grown to maturity.

REMARKS.

(a) *There is alſo a larger kind of Cotton-tree; but the Cotton it produces, though very fine, is too ſhort for uſe.*

CHAP. XXXV.

Of LOAMY EARTHS.

AMONG the various ſpecies of Earths ſome are loamy; as Porcelain, Potters-earth, Fullers-earth, and *Terra Sigillata*; and theſe are a valuable commodity, becauſe they are uſed in manufactures, or conſtitute a branch of trade.

The fineſt Porcelain-earth is found in *Europe*; and new diſcoveries are continually made of it in ſeveral countries. That of *Meiſſen*, near *Dreſden* in *Saxony*, has hitherto been eſteemed much ſuperior to any other (a). A kind of Porcelain Earth has alſo been found in the *Marc*, near *Neuſtadt* in *Lower-Auſtria*, and in *France*.

Fullers Earth is uſed by Woollen manufacturers to ſcour the greaſe out of wool. It is found in ſeveral countries; but the *Engliſh* Fullers Earth is the beſt (b).

The *Terra Sigillata*, or Sealed Earth, is uſed in medicine, and is ſo called from the Seal or mark put on it when exported. The beſt of this kind of Earth is that of the iſland *Stalimene* in the *Archipelago*, which was anciently called *Lemnos*. The digging of this Earth is attended with ſome ſuperſtitious ceremonies. The *Terra Sigillata* is alſo dug up in *Bohemia*, *Sileſia*, and ſeveral other parts of *Germany*. In *Sweden*

den, and ſome other countries, this Earth is likewiſe found.

REMARKS.

(a) *It is found in the diſtrict of* Erzgebirg, *and near* Aue, *in the diſtrict of* Schwartzenberg.

(b) *It is dug in the Counties of* Surrey, Kent, Suſſex; *in* Bedfordſhire, Staffordſhire, and *the Iſle of* Sky *near the coaſt of* Scotland. *As the* Engliſh *cloths, in a great meaſure, owe their excellency to this Earth, the exportation of it is made a capital crime by the laws of* England. *See* Dangueil's *Advantages and Diſadvantages of* France *and* Great-Britain *in point of trade.* p. 83, 84.

CHAP. XXXVI.

Of FOSSILE COLOURS.

THERE are are ſeveral ſorts of earths, which, being purified, are uſed as colours by painters and dyers. Theſe earths do not only ſave the country where they are dug up large ſums, but alſo bring annually great ſums of money into it, by the exportation of them. In this claſs are the following, *viz.*

Chalk, orpiment, yellow oker, light and dark-red oker, umber, earth of *Cologne*, *Armenian* bole, *Engliſh* earth, red chalk or ruddle, red-lead, cinnabar or vermilion, green or *French* chalk, borax, green talc, *Verona* earth, chryſocol, ceruſe, *&c.*

CHAP. XXXVII.

Of MARBLE.

EUROPE yields great plenty of marble; ſo that it is found in moſt parts of it. Marble is either white, black, or variegated with ſpots or veins. The moſt celebrated kinds of marble are thoſe of *Carrara* (a), *Paros* (b), *Florence* (c), *Genoa*, and *Sicily*. Marble is uſed for columns, pillars, and other ornaments; for edifices, monuments, tombs, *&c.*

Alabaſter is of the ſame colours as marble, and is found in *Germany*, *Italy*, and other countries.

REMARKS.

(a) Pliny *prefers the* Italian *marble to that of* Paros.

(b) *An iſland in the* Archipelago.

(c) *In the Great Dutchy of* Tuſcany.

CHAP. XXXVIII.

Of LOAMY STONES.

THE moſt remarkable in this claſs of ſtones are,

The Aſbeſtos, which is found in *Norway*, *Sweden*, and *Hungary*, and yields incombuſtible filaments like flax.

The ſeveral kinds of ſoapy-ſtones, which are unctuous, ſlippery, and ſmooth to the touch, and may be turned and poliſhed; as the ſwine-ſtone, the *Tophus*, the *Serpentine*, &c.

Talc and *Marien-Glas*, or *Muſcovy-Glas*, which is found not only in the north of *Aſia*, but likewiſe in *Sweden*, *Norway*, and *Poland.* The beſt ſort of *Marien-glas* is more clear and tranſparent than the fineſt glaſs.

CHAP. XXXIX.

Of GEMS.

THOUGH the precious ſtones found in *Europe* do not equal the oriental gems in luſtre, *&c.* yet they are of conſiderable value. All the ſpecies of them are found there, namely,

The Diamond, which has no colour.

Topaz, which is of a fine yellow or browniſh colour.

Chryſolite, which is of a greeniſh yellow.

Hyacinth, which is of a yellowiſh colour inclining to red.

Ruby, a ſtone of a ſanguine colour.

Granite, which is of a dark red.

Amethyſt which is of a violet colour.

Sapphyre, a precious ſtone of an azure or blue colour.

Opal, which is of a pale blue.

Beryl, which is of a faint or ſea-green colour.

Emerald, which is of a vivid green colour.

All theſe ſtones are found in *Germany*; and particularly in *Bohemia* and

Miſnia. Several of them are likewiſe dug up in *Moravia* and *Sileſia*, in the *Tyroleſe*, and ſome other places. *Norway*, *Sweden*, *Poland*, *Hungary*, *Spain*, *Portugal*, and *Ireland*, are not without ſome kinds of theſe precious ſtones. Cryſtal, Achate (a), Chalcedony, which is white; Cornelian or Sardius, which is red; the Chryſopus, which is green; the Onyx, which is veined, and Jaſper of ſeveral kinds, are alſo found in *Europe*. The Turquoiſe, which is of a vivid blue, is ſuppoſed to be the tooth of a fiſh petrified.

REMARKS.

(a) *Chalcedony, which is a white ſtone; Cornelian or Sardonyx, which is of a pale red; and Onyx, which is variegated with veins, are different ſpecies of Achate.*

CHAP. XL.

Of ACID *and* NEUTRAL SALTS.

THE acid Salts are Vitriol and Alum.

Vitriol is either natural, or factitious, as may be ſeen in Chap. LXXIX.

There are pure or native Alum, and and aluminous earth.

The neutral Salts are Salt-petre, and common Salt. The latter is a more important article; for common Salt is very beneficial to mankind, and even abſolutely neceſſary (a). It is either Rock-ſalt, Sea-ſalt, or Spring-ſalt.

Rock-ſalt is hewn like ſolid ſtones out of the mines, and found in *Poland* (b), *Hungary* (c), *Tranſylvania*, *Catalonia* (d), *England* (e), *Upper-Auſtria* (f), the *Tyrol* (g), and *Saltzburg* (h).

Sea-ſalt (i) is either boiled from the Sea-water (k), or prepared by the heat of the Sun. The former is made in *Norway* (l), *Sweden*, and ſome parts of *France* (m); and the latter alſo in other parts of *France* (n), in *Portugal* (o), *Spain* (p), and *Italy* (q).

In many countries of *Europe* there are ſaline-ſprings (r), of the water of which Salt is made.

REMARKS.

(a) *The inhabitants of* Iceland *are the only people in* Europe, *to my knowledge,* *who dreſs and eat their proviſions without Salt: But probably neceſſity firſt obliged them to it; for the iſland produces no Salt, and they have neither wood nor coal for fuel to prepare it from the ſea water. Salt is neceſſary not only in food, but alſo for preſerving fleſh and fiſh from putrefaction.*

(b) *Namely, in the* Woiwoda *or Palatinate of* Cracow *at* Wieliczka *and* Bochnia. *Above* 600,000 *quintals of Salt are annually dug there.* Hamburg Magazine, Vol. VI. p. 115. *This Rock-ſalt is carried all over* Poland, *and even as far as* Sileſia.

(c) *In the country on the other ſide of the* Theis, *in the diſtrict of* Maramarc, *where ſeveral mines of Salt are found. The place where the Salt-works are, is called* Rhona Szek; *and three mines are wrought there. At preſent the Rock-ſalt dug out of theſe mines amounts to about* 200,000 *quintals annually.* Vid. Compendium Hungariæ Geographicum. Poſanii, 1753. *There are alſo Salt-mines not far from* Eperies *in the diſtrict of* Taros *in* Hungary.

(d) *In the Principality of* Catalonia, *not far from* Cordova. *This mine yields a white, brown, red, and tranſparent or cryſtal Salt. Great quantities of it are exported.* Vid. Savary's Dictionaire de Commerce, *in the article* Sel.

(e) *Near* Northwich *in* Cheſhire, *and* Droitwich *in* Worceſterſhire. *See* Tour through Great Britain, Vol. II. p. 385, 386.

(f) *Near* Gmunden, *where cryſtal Salt, and Salt of various colours, is dug up. Freſh water is alſo conveyed into theſe Salt mines to be ſaturated, from which Salt is extracted by boiling.*

(g) *At a place about five miles from* Hall; *but by reaſon of its foulneſs, the Salt dug up here is diſſolved in freſh water, and then prepared for uſe by boiling.*

(h) *Not far from* Hallein: *Here alſo the Salt is prepared by boiling, as above.*

(i) *From whence the ſea water derives its ſaline quality, it is not eaſy to determine. The water of the* Baltic *is not ſo much impregnated with Salt, as that of the* North-ſea; *but the latter is leſs ſalt than the* Atlantic Ocean. *Vid.* Varennii

Geographia Generalis, Lib. I. C. 13. Prop. 8, 9, 10.

(k, l) Pontoppidan's Nat. Hiſt. of Norway, P. I. p. 72. 203, 204.

(m) *Eſpecially on the coaſts of* Normandy, *where the Salt is white. See* Savary's Dict. *in the article* Sel.

(n) *The chief Salt works of this kind on the Weſtern coaſt of* France, *are,*

1. *In* Bretagne, *namely, in* Bourneuf *bay, near* Guerande, *and* Croiſil.

2. *In* Aunis, *near* Maran, *and on the iſle of* Rhé.

3. *In* Saintonge, *near* Brouage.

On the South coaſt of France, *near the* Mediterranean *Sea, the principal Salt works are,*

In Languedoc, *namely, at* Marderac, *and* Sigean.

In Provence, *at* Berre, *and* Hieres, *and at* Rouſſillon, Canet, *and the Lake of St.* Nazaire. *This Salt is brown; and what is not carried into the* French *King's Salt magazines is bought up by the* Engliſh, Dutch, Hamburghers, Swedes, *and* Danes. *Vid.* Savary's Dict. ibid.

(o) *Moſt of the* Portugueſe *Salt is made at* Setubal.

(p) *The principal Salt works in* Spain *are at* Torre de las ſalinas dita Mata *in* Valencia.

(q) *In the* Genoeſe *territories, and the iſland of* Corſica; *near* Cervia *in the Eccleſiaſtical State*; *in the province of* Capitanata *in the Kingdom of* Naples; *in* Sicily, *at* La Marza, *and* Il Biviera di Terra Nuova.

(r) *Several of thoſe countries can make little or no advantage of their Salt ſprings, being in want of Wood and Coal for fuel to boil the ſaline water.*

Of FIXED RESINS.

CHAP. XLI.

Amber, Pit-Coal, Turf, *and* Sulphur.

IN this claſs are,

Amber, which is thrown on ſhore by the *Baltic*, particularly along the *Pruſſian* coaſt. It makes no inconſiderable article of trade.

Pit-coal, which is yet more advantageous to a country where it is dug up.

The Pit-Coal of different countries is not of equal goodneſs; but it is of very great uſe to a country which does not abound in wood, and is ſtill of much greater advantage where no wood is to be had (a). Of all the countries in *Europe*, *England* (b) yields the greateſt plenty of Pit-coal; where not only an aſtoniſhing quantity of it is annually conſumed (c), but alſo a great many ſhip-loads are exported from thence to ſeveral parts of *Scotland*, *Ireland*, *France*, *Flanders*, and *Holland*; though there are coal mines in ſome parts of *Scotland*, *Ireland*, and *France*. A great quantity of Pit-coal is dug up in the County of *Hainault*. It is alſo found in ſeveral parts of *Germany*, *viz.* the Biſhoprick of *Luttich*, in the County of *Marc*, in the Dutchy of *Berg*, the Biſhoprick of *Oſnabruc*, the Principality of *Minden*, in the Counties of *Schauenbourg*, *Ratiſbon*, and *Lingen*, in the Dutchy of *Magdebourg*, in *Miſnia*, the Landgravate of *Heſſe*, and other places. Pit-coal is uſed as fuel for common fires for culinary and domeſtic uſes, for ſmelting ores, boiling ſalt, *&c.*

Turf, which in many parts of *Europe* ſupplies the want of wood and coal.

Sulphur, of which there are three ſorts, *viz.* Virgin Sulphur, which is ſolid, yellow, and tranſparent; Rubid Sulphur, which is reddiſh and opaque; and Sulphur vivum, or Stone-Sulphur. Sulphur is alſo found in hot baths and volcanos, and likewiſe in ores.

REMARKS.

(a) Monteſquieu * *in his* Eſprit des Loix, *ſays, that countries where Coal mines furniſh the inhabitants with fuel have this advantage over others, that as they have no need of woods and foreſts, all the land may be cultivated without leaving any waſte ground. However, wood is ſo indiſpenſibly uſeful for other purpoſes, that it muſt be very detrimental for any country entirely to clear the woods, though it has the greateſt plenty of Pit-coal.*

(b) *The moſt famous Coal mines are about the town of* Newcaſtle *in* Northumberland, *and near* Whitehaven *in*

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* *Monteſquieu*'s Words are '*Les pays ou des mines de charbon fourniſſent des matieres propres à brûler, ont cet avantage ſur les autres, qu'il n'y faut point de forêts, & que toutes les terres peuvent être cultivées.* P. III. L. 23. Chap. 14.

Cumberland. Shropſhire, Staffordſhire, Derbyſhire, Nottinghamſhire, Leiceſterſhire, Somerſetſhire, Glouceſterſhire, *and the Biſhoprick of* Durham, *alſo afford Coal mines.* [*Several parts of the Principality of* Wales *yield Pit-coal.*]

(c) *In* London *only above* 600,000 *chaldrons of Coal are conſumed every year,* [*every chaldron being* 36 *buſhels,*] *which are imported from* Newcaſtle *. Tour through Great-Britain, Vol. III. p. 223, 224. *The Salt works at* Shields, *which lies about ſeven miles from* Newcaſtle, *alſo conſume an immenſe quantity of Coal. About* 1500 *ſhips from an* 100 *to* 200 *tons burden, and about* 30,000 *ſeamen are employed in the exportation of Pit-Coal from* Newcaſtle. *See* Dangueil's *Obſervation on the Advantages,* &c. Tour through Great-Britain, Vol. III. p. 219. *Concerning theſe and other Coal mines in* England, *conſult* Alberti's Letters on the State of Religion and the Sciences in Great Britain, Vol. I. p. 29.

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* Every chaldron, including the duty, *&c.* is ſold at *London,* from 30 to 40 ſhillings.

CHAP. XLII.

Of QUICKSILVER.

QUICKSILVER is a fluid mineral or ſemi-metal, and is ſometimes found pure, and ſometimes procured from native Cinnabar, and other ores. It is found in ſeveral parts of *Europe*, namely, *Ydria* between *Carniola* and the County of *Goricia* (a), in *Miſnia*, *Heſſe* (b), *Bohemia*, *Hungary* (c), *Tranſylvania* (d), *Poland*, *Spain* (e), and the Great Dutchy of *Tuſcany* (f). Quickſilver is uſed for ſeveral purpoſes; but chiefly for the ſeparation of metals.

REMARKS.

(a) *See* Keyſler's Travels, Vol. III. p. 375.

(b) *Namely, in* Upper Heſſe, *in* Heſſe-Darmſtadt, *and in the diſtrict of* Blankenſtein.

(c) *In the Palatinates of* Solien *and* Commorra, *near* Roſenau.

(d) *At* Zlatna.

(e) *At* Almaden, *and* Guadalcanal, *in the Kingdom of* Seville.

(f) *Near* Cevigliani.

CHAP. XLIII.

Of Fixed SEMI-METALS.

AMONG the fixed Semi-Metals the principal are,

Antimony, which is uſed in ſeparating Gold from other metals (a).

Lapis Calaminaris, and Zink or Spelter, which being fuſed together with Copper, make Braſs (b).

Bizmuth or Tin-glaſs.

Cobolt or Kobald, which ſerves for making the fine blue powder called Smalt (c); and Arſenic, which is either found pure, or prepared from arſenical earths. Theſe may be claſſed among the greater natural advantages of a country.

REMARKS.

(a) *Antimony abſorbs and incorporates with all other metals, Gold excepted; over which it has no power, but ſubſides in what the Chymiſt calls* Regulus.

(b) *Zink, or Spelter, makes better Braſs than* Lapis Calaminaris.

(c) *Cobolt is chiefly found in mines; and there are ſeveral different kinds of this mineral. However, the Cobolt found near* Schneeberg *in* Miſnia, *is preferred to any other. And as there are ſurpriſing quantities of ſmalt made of it, this mineral has proved of little leſs advantage to* Saxony *than its rich ſilver mines.*

CHAP. XLIV.

Of GOLD.

EUROPE yields the leaſt Gold of any of the four parts of the world. It is procured from mines (a) in *Germany* (b), *Sweden*, *Hungary* (c), and *Tranſilvania.* This precious metal might alſo be dug up in ſmall quantities in other countries, if the inhabitants would be at the expence and pains of ſearching for, and ſeparating it (d). Pure Gold is likewiſe found among the ſand in ſeveral rivers; particularly the *Rhine* (e), the *Eder* and the *Keres* (f). Gold is uſually valued at fifteen times its weight in Silver; however, this proportion between the two metals ſometimes varies a little. The *Europeans* import a great quantity of Gold from the other three parts of the world.

REMARKS.

(a) *The ſeparation of Gold from Silver and Copper is an expenſive proceſs. It is ſeparated from thoſe metals by the help of Antimony*, Aqua fortis, (*which is a nitrous acid menſtruum*) *and Sulphur.*

(b) *It is found in ſmall quantities in the Archbiſhoprick of* Saltzburg, Tyrol, *and the County of* Waldeck. *In* Bohemia, Moravia, *and* Sileſia, *they have given over any farther ſearch after it.*

(c) Hungary *yields the beſt Gold, and in the greateſt quantity, of any country in* Europe.

(d) *Gold has been found in* Norway, *and coined into Ducats*; * *but at preſent the* Norwegians *do not attempt to dig for it. The* Spaniards *alſo will not be at the trouble and expence to ſearch for the Gold, which the mountains of* Spain *are ſuppoſed to contain in their bowels.* Sicily, Scotland, *and* Poland *have alſo produced Gold.*

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* Vid. *Pantoppidan*'s Nat. Hiſt. of *Norway*, P. I. p. 179, 180, of the *Engliſh* tranſlation.

(e)

(e) *There are particularly two places where Gold is waſhed out of the ſands of the* Rhine, *namely, the diſtrict of* Germerſheim *and* Selz *in the* Palatinate, *and below* Straſburg.

(f) *There are two rivers of this name, one called* Fekete-Keres, *and the other* Fejer-Keres, *diſtinguiſhed in Latin by the names of* Chryſius Niger, *and* Chryſius Albus. *Both theſe rivers are in* Hungary, *on the other ſide of the Palatinate of* Saran, *beyond the* Theis.

CHAP. XLV.

Of SILVER.

THERE are many very conſiderable Silver-mines in *Europe*, where this metal is found either pure, or in ore. The moſt remarkable Silver-mines are in *Germany* (a), *Alſace*, *Norway* (b), *Sweden*, *Hungary* (c), *Tranſylvania* (d), the Kingdom of *Naples* (e), and ſome other countries. A ſurpriſing quantity of Silver is annually brought from *America* to *Europe*; but a great part of it is exported from thence to *Aſia*.

REMARKS.

(a) *In* Germany, *Silver mines are at preſent wrought*

In the Foreſt of Hartze; *and theſe works belong to the Elector of* Brunſwick, * *King of* Great-Britain, *the Prince of* Anhalt-Bernburg, *and Count* Stolberg.

In Miſnia, *at* Freyberg, Schneeberg, Annaberg, Marienberg, Johanngeorgenſtadt, &c.

In Bohemia, *at* Cuttenberg, Joachimſthal, &c.

In Lower Auſtria, *at St.* Annaberg.

In Tyrol *not far from* Schwatz.

In the Archbiſhoprick of Saltzburg, *near* Gaſtein.

In Bavaria.

In the Dutchy of Wurtenberg.

In the Archbiſhoprick of Triers.

In the Landgravate of Heſſe.

In the County of Hanau.

In the Circle of Weſtphalia.

In the County of Henneberg.

(b) *Namely, at* Kongſberg, *and in the County of* Jarlſberg. *The produce of the*

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* The annual produce of this mine amounts to 800,000 rixdollars, or 69,900 marks of ſilver.

Silver mines of Kongſberg *from the year* 1711 *to* 1724, *may be ſeen in* Pontoppidan's Natural Hiſtory of Norway, P. I. p. 189. Eng. Edition. *and* Swedenborg's Regnum Subterraneum.

(c) *Particularly at* Schemnitz.

(d) *At* Torotſko, *and* Groſ-Schlatten.

(e) *Namely, in* Calabria.

Of COMMON METALS.

CHAP. XLVI.

COPPER.

COPPER is found either pure, in Copper Cement, as it is called (a), or in Copper Ore. *Europe* affords great plenty of this metal; but it is not of equal goodneſs in all parts. It is found in many parts of *Germany* (b), *France*, *England* (c), *Norway* (d), *Sweden* (e), *Hungary* (f), *Tranſilvania*, and *Italy* (g). A mixture of *Lapis calaminaris*, and Zink, or Spelter, with Copper produces Braſs (h), and Tombac (i).

REMARKS.

(a) *This is extracted from* Cement, *or water impregnated with particles of Copper;*

per; which either drops from the ſides of the mines or Copper works, or ſprings out of the earth. Iron being put into this water has its particles corroded away, and thoſe of Copper inſinuate themſelves into the interſtices; ſo that at the end of fifteen or twenty days the Iron is, as it were, converted into Copper: but if this be left too long in the Cement-water, it moulders away into Copper duſt. This Cement-water is found at Herrengrund *and* Shmolnitz *in* Hungary, *in* Oeſterdalen *in* Norway, *in the County of* Wicklow *in* Ireland, *at* Falkenau *in* Bohemia, *and at* Groſmehre *in* Lower-Luſatia.

(b) *In the Foreſt of* Hartze, Miſnia, Mansfeld, Bohemia, Henneberg, Tyrol, Saltzburg, Bavaria, Wurtenberg, Triers, Heſſe, Waldeck, Hanau, *the* Marc, &c.

(c) *In the Counties of* Cornwal, Somerſet, *and* Cumberland.

(d, e) *The Copper found in the Northern countries is reckoned the fineſt.* Vid. Pontoppidan's Nat. Hiſt. of Norway. P. I. p. 192. *of the* Engliſh *Tranſlation.*

(f) *In the Palatinates of* Solien, Zeips *and* Comorra.

(g) *In the Dutchies of* Parma, and Placentia, *in the Diſtrict of* Breſcia, *in* Tuſcany, *and the iſland of* Sicily.

(h) *Copper being firſt purified from its acrid ſalt, and melted, ſome* Lapis Calaminaris, *or rather Spelter, is put into it to make Braſs. In order to make a very beautiful Braſs, and perfectly malleable and ductile, you muſt put to a pound of pure Copper four ounces of Zink or Spelter.*

(i) *To one pound of pure Copper melted put twelve ounces of* Eaſt-India *Zink; and it will produce* Tombac *of a beautiful gold colour, and tolerably malleable.*

CHAP. XLVII.

IRON.

IRON is the hardeſt of all metals; and as it is alſo the moſt uſeful * to mankind, Providence has been pleaſed to diſpenſe it in greater abundance than any other metal. Very little Iron is found pure in the mines; it being generally extracted from ore, or a ferrugineous earth. Every country in *Europe* is ſtored with this metal; but there is ſuch plenty of it in ſome countries, that it conſtitutes their principal ſource of wealth (a). Hitherto *Sweden* has produced the beſt Iron, and in the greateſt plenty (b). A great quantity of good Iron is alſo exported from *Norway* (c). The *Ruſſian* Iron comes from *Siberia*, and conſequently is the produce of *Aſia*.

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* The many utenſils made of Iron will hereafter be enumerated in the article of Manufactures.

There are indeed ſome mines of Steel (d); but it is generally made of Iron (e). The Steel made in *Stiria* is the beſt, which is owing to the goodneſs of the Iron found in that country (f).

REMARKS.

(a) *This is applicable to the County of* Namur, *the Dutchy of* Luxenburg, Sweden, *and ſome other countries.*

(b) *The* Swediſh *Iron is preferable to any other, and, at the ſame time, is very cheap. Three hundred thouſand ſhip-pounds (every ſhip-pound being* 320 Swediſh *pounds) of Iron are exported from* Sweden *every year.* Vid. Sven Bring*'s* Diſertatio de felicitate regni Svio-Gothici arte magis quàm Marte parandâ.

(c) *The Iron exported from* Norway *amounts annually to about three or four hundred thouſand Rixdollars* *. Pontoppidan *in his* Natural Hiſtory of Norway (P. I. p. 200. Eng. *Edit.*) *gives an account of this, and aſſigns a reaſon why the* Norway *Iron is not ſold ſo cheap as the* Swediſh.

(d) *In the diſtrict of* Dambach *in* Alſace, *in the high mountains called* Gunzen *in* Switzerland, *and in* Piedmont, *are Steel-mines.*

(e) *Steel is made either by fuſion, or Cement, by firſt mixing ſeveral combuſtibles with Iron, and then quenching it in cold water, or any other fluid; by which means the Iron acquires a greater degree of hardneſs, and becomes Steel.*

(f) *Even in the greateſt part of the Steel-works in* England *they make uſe of the* Stiria *Iron.*

CHAP. XLVIII.

TIN.

TIN, the lighteſt of all metals, is extracted from an ore; for pure native Tin has never yet been found in the earth. The *Engliſh* Tin is the beſt (a); and next to that, is the Tin of *Bohemia* and *Miſnia* (b). This metal is found alſo in ſome other parts of *Germany* (c), and likewiſe in the iſland of *Sicily*, in *Spain* and *Portugal*. Great quantities of it are uſed for utenſils *, for tinning copper and braſs veſſels, *&c.*

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* A Rixdollar is equal to 3s. 6d. Sterling.

REMARKS.

(a) *The counties which produce it in* England *are* Cornwal, *and* Devonſhire †. *The exportation of pure or block Tin from* England, *without any mixture of Lead, is prohibited.*

(b) *Particularly the* Altenberg *Tin.*

(c) *In the Archbiſhoprick of* Triers, &c.

CHAP. XLIX.

LEAD.

LEAD is the ſofteſt and moſt eaſily fuſed of all metals. *Europe* yields abundance of this metal; but the beſt is that of *England* (a). Lead is uſed for ſeveral purpoſes (b).

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* The Author, under this article, comprehends what we call Pewter as well as Tin.

† There are few or no Tin mines in *Devonſhire* at preſent, the North-weſt part of *Cornwal* being almoſt the only place where Tin is found.

REMARKS.

(a) *There are Lead mines in* Devonſhire, Somerſetſhire, Derbyſhire, *the Biſhoprick of* Durham, Northumberland, Cumberland, *and in* Carmarthenſhire, Flintſhire, *and* Denbighſhire, *in the Principality of* Wales.

(b) Viz. *for covering the roofs of edifices, for ſpouts, water pipes, ciſterns, ſtatues, ornaments and windows of houſes, veſſels of ſeveral kinds, bullets, weights, &c.*

CHAP. L.

Of GRAZING, *or,* FEEDING *of* CATTLE.

FEEDING of Cattle is generally practiſed in proportion to the quantity of Paſturage. Paſtures in ſome countries are rich and ſucculent (a), in others middling, and in others the Graſs is poor and ſcarce (b). Though Breeding of Cattle be more profitable, and requires leſs labour than tillage; yet to neglect the latter for the ſake of the former is very detrimental to any country. For Corn is alſo advantageous, and in a manner neceſſary for the ſubſiſtence of the inhabitants, and Agriculture employs more hands than graſing or feeding Cattle (c). The latter ſupplies us with beaſts for draught and burden, and likewiſe with Fleſh, Milk, Butter, Cheeſe, Leather, and other neceſſaries.

REMARKS.

(a) *Particularly in marſh-lands, as thoſe which border on the* German *Ocean, the* Elbe, *and other rivers. In* Podolia *the graſs grows to the horns of the cattle that graſe in it. Marſh-lands likewiſe produce the largeſt cattle.*

(b) *Namely, in thoſe countries where the ſoil is very dry and barren.*

(c) *It conſequently cauſes an increaſe in the number of the inhabitants of a country. An inſtance of this may be ſeen in* England, *where they have plowed a great quantity of meadow-lands, notwithſtanding the former prohibition by the Legiſlature.*

It is a juſt complaint in ſeveral other countries, that graſing increaſes to the detriment of tillage; particularly in Hungary. *Vid.* Compend. Hung. Geogr. p. 79.

CHAP. LI.

HORSES.

THE Horſe ſpecies, in which may be included the Horſe, the Muſe, and the Aſs, is of great importance; and the right management of theſe animals proves a very conſiderable profit to any country, ſo that they may be claſſed among the ſources of its wealth (a). The *European* breed of Horſes has been greatly improved by *African* (b) and *Arabian* (c) ſtallions. The beſt Horſes are thoſe of *Spain* (d), *England* (e), the territories of *Venice* and *Naples* (f), *Denmark* (g), *Poland*, *Hungary*, *Moldavia*, *Wallachia*, the *Ukraine* or *Little-Ruſſia* (h), *Germany* (i), and *Friezland* (k).

Chagreen is made of the ſkin of a Horſe, or rather of a ſpecies of Aſs.

REMARKS.

(a) *Studs, if well managed, bring in annually four, ſix, eight, or even ten* per cent. *for the money laid out on them. A prime Horſe ſells for* 3 or 400 *Rixdollars* *. *Horſes for Dragoons and Cuiraſſiers coſt from thirty-five to forty or fifty Rixdollars. From this we may form an idea of the vaſt expences of maintaining a numerous cavalry.*

(b) *The* Barbary *Horſes are next in eſteem to thoſe of* Arabia. *Concerning both theſe, ſee the* Duke of *Newcaſtle*'s Horſemanſhip.

(c) *The* Arabian *Horſes, in all ages, have been the moſt celebrated in the whole world; and a careful account is generally kept of their pedigree.*

(d) *Eſpecially* Andaluſia. *The* Spaniſh *Horſes are the beſt, except thoſe of* Barbary. *Theſe are likewiſe deſcribed by the Duke of* Newcaſtle *in the abovementioned treatiſe.* p. 41.

(e) *The* Engliſh *Horſes are originally of the* Barbary *and* Arabian *breed.* England

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* A Rixdollar is 3*s*. 6*d*. ſterling.

land *produces excellent Horſes for hunting and running races; but they are now declining.* Vid. Duke of Newcaſtle's Horſemanſhip. p. 47.

(f) *The Kingdom of* Naples *produces good Coach horſes.*

(g) *The* Daniſh *Horſes are very good either for a carriage, or to mount cavalry.* Jutland *is the province that affords the beſt Horſes in* Denmark, *particularly the diſtrict of* Tye.

(h) *The Horſes which theſe countries afford are very ſwift. They uſually wander about wild, and always lie in the open air; ſo that they are very hardy, and can live on any kind of fodder.*

(i) *The moſt celebrated ſtuds in* Germany *are on* Sennar-heath *in the County of* Lippe, *and at* Buckeburg, *in the County of* Schaumburg. *The annual produce of the former, in its moſt flouriſhing condition, was but little ſhort of twenty thouſand Rixdollars: but ſince the year* 1730 *they have fallen into decay. There is a very good breed of Horſes alſo in* Holſtein, Eaſt-Frieſland, Oldenburg, *ſome parts of the* Hannoverian *dominions,* Wirtenburg, Anſpach, *and the Biſhopricks of* Bamberg *and* Wirtzburg.

(k) *This Country affords good Coach Horſes. See* Duke of *Newcaſtle*'s Horſemanſhip. p. 50, 51.

CHAP. LII.

HORNED CATTLE.

THE breeding of horned cattle, beſides the other advantages of it, is indiſpenſibly neceſſary to the culture of land. They alſo furniſh milk, butter (a), and cheeſe (b); their horns (c), hides (d), and the tegument of the inteſtine (e), their fleſh (f), and fat (g), are very uſeful to mankind. *Hungary* (h), and *Poland* (i), annually reap immenſe profits from their horned cattle. *Jutland* (k), and ſeveral parts of *Germany* (l), alſo diſpoſe of large droves. Buffaloes are not ſo rare (m) as the Aueroxen, which are now exceeding ſcarce (n).

REMARKS.

(a) *Not only the inland trade for butter, but likewiſe the foreign is very conſiderable. Prodigious quantities of this commodity are annually exported from*

Holſtein, Eaſt-Frieſland, Oldenburg, Bremen, *and other parts of* Germany, *from the* Netherlands, Ireland, *and ſome other* European *countries.*

(b) *The moſt noted countries for cheeſe are* Switzerland, England, Limburg; *the* Marſhland, *the Dutchies of* Holſtein, Sleſwick, *and* Parma.

(c) *Horn is made both of the horns and hoofs, and is uſed for combs, boxes, inkhorns, and handles for knives and forks, toys,* &c.

(d) *The beſt leather made of calf-ſkin is that of* England, Switzerland, *and* Germany; *the hides of horned cattle as well as calf-ſkins are applied to ſeveral neceſſary uſes. The beſt leather is made in* Ruſſia, *where it is dreſſed in a particular manner.*

(e) *In* England *the tegument or coat of the inteſtine of horned cattle, is uſed for beating gold and ſilver into thin leaves for gilding. This is a ſecret known only to the* Engliſh.

(f) *Beef is not only eaten freſh, but ſalted and ſmoaked; and the two laſt make a conſiderable article in the exports of ſeveral countries.*

(g) *Their fat is chiefly uſed for tallow candles.*

(h) *The droves of bullocks, which every year go out of* Hungary, *are computed at a hundred and twenty thouſand head of cattle. Vid.* Compend. Hungary, Geogr. p. 3.

(i) *Formerly between eighty and ninety thouſand head of cattle were annually driven out of* Poland.

(k) *A great many thouſands are driven annually out of* Jutland.

(l) *Particularly* Eaſt-Frieſland, *the County of* Oldenburg, Thuringia, *and other places.*

(m) *Theſe are naturally wild, but may be tamed. They frequent watery places, and the ſea ſhore. They are ſeen in great numbers in* Italy; *eſpecially in* Apulia, Tuſcany, *and the* Campagna di Roma. *They are alſo frequent in* Hungary, Tranſylvania, *and other places. Their ſkins ſerve for cuiraſſes for the cavalry, pouches, belts, gloves,* &c. *Buffalo's hair is uſed for ſtuffing ſaddles, chairs,* &c. *Of their horns are made roſaries, tobacco-boxes, and other turnery-ware.*

(n) *Theſe have been extirpated out of the* Black Foreſt, *and* Pruſſia; *but are now and then ſeen in the province of* Maſovia *in* Poland.

CHAP. LIII.

SHEEP *and* GOATS.

EVERY thing belonging to Sheep is uſeful. Their very dung makes a good manure for land (a). Their milk produces cheeſe; their inteſtines ſerve for ſtrings; their fat for food, and candles. Their fleſh, particularly that of wethers, is eaten freſh, or ſalted (b). Their ſkin is uſed as a kind of furr, or is made into leather and parchment (c). Their wool is of the greateſt advantage to the country where it is produced (d). *Spain* has improved its flocks of Sheep by colonies from *Africa* (e); and the breed in *England* is mended by importing *Spaniſh* Rams (f); ſo that *Spain* including *Portugal* (g), and *England* yield the beſt wool. *Scotch* and *Iriſh* wool is generally ſold under the name of *Engliſh*, tho' the two former are remarkably inferior to that of *England*. The *Dutch*

(h),

(h), the *Neapolitan*, the *Poliſh*, and the *Marc* Sheep (i) likewiſe yield excellent wool. Some countries are at preſent endeavouring to improve their breed of Sheep and the quality of their wool (k).

Goats afford milk and cheeſe. The beſt hair of Goats and Antilopes (l) is very uſeful; and leather and parchment are made of their ſkins (m). The Antilope (n), and Chamois (o) delight in mountainous places; but theſe animals, eſpecially the former, are daily diminiſhing.

REMARKS.

(a) *In* Norway *Sheep-dung is alſo uſed medicinally.* Vid. Pontop. Nat. Hiſt. of Norway. Part II. p. 7. *Eng.* Edit.

(b) *Great quantities of ſalt-mutton are exported from the iſlands of* Faroe, Iceland, *the* Orkneys, *and* Ireland.

(c) *A great quantity of parchment is made in* France, *and ſent from thence to* Flanders, Holland, England, Spain, *and* Portugal.

(d) *This is one of the chief raw materials for manufactures.*

(e) *The* Spaniſh *Sheep are ſmall; but their wool is the fineſt in* Europe. *From the*

the number of Shepherds in Spain, *which is computed at forty thouſand, ſome judgment may be formed of the vaſt flocks of Sheep in that country.*

(f) *An* Engliſh *Sheep of the largeſt kind yields every year from* 5 *to* 8, *and ſometimes* 9, *pounds of wool, which is at leaſt five times as much as a ſingle Sheep does in* Germany. *The* Engliſh *wool is not ſo fine as the* Spaniſh, *but is next to it in value. There is both ſhort and long wool produced in* England; *the fineſt* Engliſh *wool grows in* Glouceſterſhire, *and the longeſt ſort is produced in* Lincolnſhire, *and* Leiceſterſhire. *The number of Sheep in* England *is aſtoniſhing. See* Dangueil's advantages and diſadvantages of Great Britain in reſpect of Trade. p. 72.

(g) Portugal *wool is often ſold for* Segovia *wool.*

(h) *The wool which the* Hollanders *import from* Germany *and* Pruſſia, *likewiſe goes under the name of* Dutch *wool.*

(i) *The* Marc *of* Brandenburg *yields a great quantity of wool, which is very good in quality; ſo that it is one of the chief commodities of that country.*

(k) Sweden *is now making theſe improve-*

provements. The method for meliorating wool is laid down in a judicious Eſſay on that head, publiſhed in the Hamburg Magazine, Vol. XIX. p. 170.

(l) *It is uſed for perukes. The fineſt of this ſort is brought from* Hungary, *and* Ruſſia; *laces, cordings,* &c. *are alſo made of it. In* Turkey, *and ſeveral* Aſiatic *countries, there is a ſpecies of ſmall Goats, of the hair of which mohair is made.*

(m) *They are dreſſed into* Spaniſh, Morocco, *and other ſorts of leather, which are uſeful on ſeveral occaſions. Seventy or eighty thouſand raw* Goats-*ſkins, ſome thouſands of which are dreſſed, are annually exported from* Bergen.

(n) *Antilopes are found in* Dauphiné *and* Piedmont, *where they are called* Bouquetins; *and in* Saltzburg, *the* Tyroleſe, Switzerland, *and the iſland of* Candia.

(o) *Chamois alſo are found in* Salzburg, Tyrol, Auſtria, Stiria, *on the* Alps, *and the* Carpathian *mountains. In the bodies of theſe animals are found balls which have all the virtues of the Bezoar. Their ſkin when dreſſed into a kind of leather is as ſoft as velvet.*

CHAP. LIV.

Of the DEER KIND.

VENISON, or the fleſh of Stags and other Deer, is known to be a very palatable food. The fat of both, and the horns and marrow of the former, are a part of the *Materia Medica*. Handles for various utenſils are made of their antlers, and rings out of the hoofs; Deer-ſkins are likewiſe very uſeful. Moſt countries in *Europe* are ſtocked with Deer; but ſome have them in greater plenty than others. For in ſome parts of *Europe* there are but very few, and in others none at all.

The Elk, which is an animal that partakes of the nature of the Stag and the Horſe, is found in *Norway*, *Sweden*, *Livonia*, *Courland*, *Lithuania*, *Poland*, and *Pruſſia*. The fleſh of this animal nearly reſembles that of the Stag in taſte: His ſkin bears a good price, of which is made a ſtrong, but ſoft, kind of leather. His hoofs are uſed for making rings, and of the horns are made handles for knives, &c. (a).

The Rein-Deer (b), which is to be found in *Norway*, *Lapland*, and the northern parts of *Ruſſia*, is an animal peculiar to the Northern countries, and highly beneficial to the inhabitants. The tame Rein-Deer in ſummer time carry burdens, and in the winter draw the ſledges, which are uſed as carriages, with incredible ſwiftneſs. Beſides, theſe animals yield milk, cheeſe, and fleſh; and the ſkins ſerve for clothing, bed-coverings, tents, &c. even their tendons ſupply the want of thread.

REMARKS.

(a) *See* Pontoppidan's Hiſt. of Norway. Part II. p. 10.

(b) Ibid. p. 11. *and* Hogſtrom's *Deſcription of* Lapland.

CHAP. LV.

Of Animals *which are valuable on account of their* FURRS.

IN this claſs are Hares, the Furr of which in the Northern countries turns white in winter, and Rabbets; theſe animals are valuable on account of their Fleſh, Furr, and in other reſpects (a). Squirrels are reckoned eatable by ſome nations; but they are moſtly valued for their hair, as it is a kind of Furr (b). The Skins of Ermines (c), Martens (d), and Sables (e), are ſold at a very high price. The Skins of Wolves (f), Foxes (g), Lynxes (h), Bears (i), Hyæna's (k), Otters (l), and Beavers (m), are likewiſe valuable; as all of them have their various uſes.

REMARKS.

(a) *No leſs than three hundred and fifty thouſand white Hare-Skins are annually exported from* Peterſburg.

(b) *In the Northern countries, the brown Furr of Squirrels changes into a gray colour: The beſt of theſe ſkins come from* Ruſſia. *The black and ſilver-coloured Squirrel Skins are moſt valued.*

(c) *The whiteneſs of the* Norway *Ermine laſts longer then that of the* Ruſſian.

(d) *The Tree-marten's Skin ſells better than that of the Rock-marten.*

(e) *The beſt Sables are brought from* Siberia.

(g) *Be-*

(f) *Of Wolves Skin are made a kind of looſe coats with the hairy ſide outward, and lined with ſome other Skin.*

(g) *Beſides reddiſh Foxes, in the Northern countries are found white, croſs, and black Foxes; the Skin of the latter ſort is more valued than a Sable.*

(h) *There are various ſorts of Lynxes; but that called the Cat-Lynx has the moſt valuable Skin.*

(i) *Bears Skins are made uſe of for muffs, caps, linings,* &c. *Some people think their Fleſh not unpalatable. It is not uncommon in* Poland *to teach Bears to dance, and ſhew them about for money.*

(k) *The Skin of the Hyæna is gloſſy and black, with brown and yellow ſtreaks; and the hair of it is very ſoft.*

(l) *There are river and ſea Otters; but the Skin of the latter fetches the beſt price.*

(m) *The Beaver is celebrated for its ſkill in architecture, and eſteemed on the account of its valuable Skin. The darker and brighter the hair of this animal is, the more valuable it is reckoned. Beaver is uſed for making hats, Gloves, ſtockings,* &c.

CHAP. LVI.

Of BIRDS.

BIRDS are divided into Land-fowl, Water-fowl, and Strand-fowl. Each of theſe ſpecies is of great uſe to men, by furniſhing them with fleſh, eggs, and feathers. Feathers are a conſiderable article of trade; and the Down of a fowl which is common in *Norway*, *Iceland*, the *Faroe*, and *Orkney* iſlands, bears a great price. See *Pontoppidan*'s *Nat. Hiſt. of Norway*. P. I. p. 71. *Eng.* Edit. and *Anderſon*'s *Account of Iceland, Greenland*, and *Davis*'s *Streights*.

CHAP. LVII.

Of FISHERIES.

FISHING in rivers, ponds, and lakes, is indeed of conſiderable advantage to any country; and particularly, great profits ariſe from the Salmon Fiſheries (a). But the moſt important Fiſheries are thoſe carried on in the ſeas, and bays. In the Northern Ocean the catching of Whales, and other kinds of large fiſh which have a ſmooth ſkin, and are viviparous, is attended with conſiderable profit (b). The moſt valuable among thoſe ſpecies which have ſcales and fins, and are ingendered from ſpawn, are the Herring (c), the Cod (d), and the Tunny-fiſh (e) Theſe ſeveral kinds of Fiſheries bring in ſeveral millions of Dollars annually to the inhabitants of *Europe (f).*

REMARKS.

(a) Norway, Sweden, England, Scotland, *and* Ireland, *have the greateſt plenty of Salmon. Vaſt quantities of Salmon, both dried and pickled, are exported from thoſe countries.*

(b) *Theſe ſpecies chiefly yield train oil, whale-bone, ambergris, and ſperma-ceti. See* Anderſon's Account of Iceland, &c. Pontop. Nat. Hiſt. of Norway, P. II. p. 118, & ſeq.

(c) *To the Herring kind belong the Sardine, the Pilchard, the Sprat, and the Stromling. The greateſt Herring fiſhery is carried on by the* Dutch *at the iſland of* Shetland. *The* Engliſh, Scotch, *and* French, *alſo catch them in the* North Sea. *See*

See Anderſon. *Great quantities are alſo caught near the coaſt of* Norway. *See* Pontop. Nat. Hiſt. of Norway. *A Herring fiſhery is now carried on by the* Swedes *off the coaſt of* Bohus. *The Sardines and Sardelles, which by the* Engliſh *are called Pilchards, are caught in immenſe quantities along the coaſts of* Cornwal *and* France, *and likewiſe in the* Mediterranean; *but the Stromlings are only found in the* Baltic *Sea.*

(d) *Cod and Ling are of the ſame kind. The Cod is larger than Ling; but the latter is longer and narrower than the former. Theſe ſpecies are caught in great numbers in the* North-ſea, *and likewiſe in the* Baltic; *and are eaten either freſh, or ſalted and dried. Salted Cod is called Salt-fiſh* *; *but when it is dried it goes by the name of Stock-fiſh. It has likewiſe ſeveral other names among the Northern people, from the different method of preparing it. See* Anderſon, *and* Pontoppidan.

(e) *Theſe are caught in the* Atlantic *Ocean, and in the* Mediterranean *off the coaſt of* Spain, France, *and* Sicily.

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* The *French* call it *Moruë.*

(f) *The value of the fiſh annually caught on the coaſt of* Norway *is computed to exceed a million of Rixdollars* *; *and the quantity of Herrings caught every year by the* Dutch *off* Shetland, *at leaſt, ſells for as much.*

CHAP. LVIII.

Of TESTACIOUS, *Or* SHELL FISH.

OF the Fiſh incloſed within Shells, which are either hard and immovable, or ſlight and pliable ſo as to move with the body of the animal, we ſhall only take notice of the Oyſter (a), the Muſcle, and the Lobſter. The coaſts of thoſe countries which are waſhed by the North Sea abound with Oyſters, which, as they are reckoned delicacies for the palate, are a conſiderable article of trade (b). The pearls found in Oyſter-ſhells are inferior to thoſe which are found in Muſcles. The ſhells of the fiſh called Spaniſh-Oyſters are uſed for decorating fountains, grottos, and caſcades. Of the Muſcle kind, both the common ſort and the pearl Muſcles (c) deſerve notice. Lobſters alſo conſtitute a conſiderable article in trade (d).

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* A Rixdollar is equal to 3 s. 6 d. ſterling.

REMARKS.

(a) *Common Oyſters are divided, according to the difference of the beds or dredges, into Mountain, Sand, and Loam Oyſters.*

(b) *As thoſe of* England, Norway, *and* Sleſwick.

(c) *The beſt Pearl Muſcles are found in rivers, and in moſt parts of* Europe; *but the* American *and* Aſiatic *Pearls ſurpaſs thoſe of* Europe, *both for largeneſs and beauty.*

(d) *Particularly in* Norway. *See* Pontoppidan's Nat. Hiſt. of Norway, P. II. p. 173. Eng. *Edit.*

CHAP. LIX.

Of SILK-WORMS.

THE Silk-worm is, of all inſects, the moſt worthy of our notice; ſince its precious labours furniſheth us with one of the principal raw materials for a beautiful manufacture, by which a great a great number of hands are ſupported in ſo many different branches of it. The beſt food for this inſect is the leaf of the white mulberry-tree. *Roger* I. King of *Sicily*, in the year 1130, firſt introduced Silk-worms into his Kingdom, and in the ſame year, brought out of *Greece* perſons ſkilled in the cultivation of Silk. From *Sicily* this art afterwards ſpread into *Italy* and other countries. A great quantity of Silk is annually exported from *Sicily*, *Naples*, *Bologna*, *Genoa*, *Milan*, *&c.* particularly *Piedmont*, which produces the beſt Silk in *Italy*. *France* alſo produces a great deal of Silk, but far from being ſufficient for its manufactures. *Spain* yields abundance of Silk. In *Portugal*, and ſeveral iſlands in the *Mediterranean* and *Archipelago*, as *Candia*, *Thermia*, *Tine*, *Andros*, *Naxia*, and *Zia*, together with the *Morea*, Silk is cultivated; and ſometimes they export a conſiderable quantity of it. This branch of trade is alſo continually improving in *Germany*, and even in the northern parts of that country.

CHAP. LX.

Of BREEDING *of* BEES.

IN ſome countries the breeding of Bees is reckoned one of the chief ſupports of the inhabitants; ſince they carry on a conſiderable trade with Honey (a) and Wax. It is more particularly advantageous to thoſe countries where the ſoil is overgrown with Heath or Ling; ſuch places not being fertile enough to produce Corn, but, on the contrary, very proper for Bees.

With Honey a liquor called Mead or Metheglin is made, which derives its name from the *Poliſh* word *Miod*, i. e. Honey.

REMARK.

(a) *In the Dutchy of* Luneburg, *there are ſome pariſhes in the Heath, where three or four hundred caſks of Honey are produced every year. Every caſk, when it is cheapeſt, is ſold for* 12 *Rixdollars on the ſpot; but oftener for* 20 *or* 30 *Rixdollars. In the ſame place a good ſtock of Bees, beſides a great quantity of Honey,* *yields four or five thouſand pounds of pure wax.*

CHAP. LXI.

Of the beſt Method of Computing the NUMBER *of the* INHABITANTS *of any country.*

THE moſt certain method of knowing the Number of inhabitants in any country is by numbering them. But as this practice has hitherto very ſeldom taken place, and but in few places (a), though it would be of great ſervice to number the inhabitants of a country every year (b), another method muſt be made uſe of to arrive at the knowledge of this particular. When the Number of hearths, or, which is the ſame thing, of families ſettled in a place is known, we muſt allow to every hearth or family, according as the city or country is more or leſs populous, four and a half, five, or ſix perſons; and the total of theſe will give us, pretty nearly, the Number of the Inhabitants in that city or country (c). Another method to arrive at this knowledge, is to find out the annual proportion between the Number of deaths, and the Number of living Inhabitants for many years together. Now it has been obſerved that in large, populous, and wealthy cities, the Number of deaths is greater in proportion to the Number of the living, than in middling or ſmall towns; and even in the latter, it exceeds the uſual proportion in the country. In great cities, one perſon dies every year out of twenty-four or twenty-eight living perſons; in middling or ſmall towns, the proportion is one out of thirty or thirty-two; and in the country only one dies out of forty or forty-two. But if we take a whole ſtate or kingdom together, cities, towns, and villages included, one dies annually out of thirty-two or thirty three perſons, and in ſome countries only one out of thirty-ſeven (c). Thus when the annual Number of the deaths in any city or country is known by comparing ſeveral years at a medium (e), this Number muſt be multiplied by one of the above Numbers, according to the difference obſerved betwixt cities, and countries; and the total will give, pretty nearly, the whole Number of Inhabitants. If we conſider the Inhabitants of a ſtate collectively, we may compute, that thoſe who live in cities and towns make about one third, and the country people conſtitute the other two thirds, of the Inhabitants (f). The yearly Number of Births generally exceeds the Number of Burials; ſo that in time of peace, and when no epidemical diſtemper rages, the Inhabitants increaſe every year (g). It appears alſo by the pariſh regiſters, that more males than females are uſually born; the proportion of the latter to the former being as 1050 to 1000, or as 21 to 20.

REMARKS.

(a) *Such an account was taken of all the Inhabitants in* France *at the cloſe of the ſeventeenth century, and likewiſe in the year* 1733. *The Inhabitants of the Dutchy of* Wirtemberg, *and of the Kingdom of* Pruſſia, *and the Electorate of* Brandenburg, *are annually numbered. In the year* 1756, *the Inhabitants of the Electorate of* Brunſwick Lunenburg *were numbered, and likewiſe thoſe of* Spain *in* 1701 *and* 1723.

(b) *For it is of great conſequence, that the regency ſhould know whether the people increaſe or decreaſe in the country they govern.*

(c) This is the method by which Geronymo de Uſtariz *computes the Number of the Inhabitants of* Spain, *in his* Theory and Practice of Trade, Chap. XVIII.

(d) *The yearly bills of burials, births, and marriages, are of great importance and benefit: for they not only ſhew the increaſe or decreaſe of the Number of Inhabitants in any city or country, but likewiſe point out the ſource or chief cauſe of it; and on that account are preferable to the enumeration of the Inhabitants. Bills of mortality ſhould therefore be introduced into all countries, and be carefully kept, and publiſhed every year. In the collecting and uſe of theſe yearly Bills, no perſon has deſerved better of the Public than the Rev. Mr.* Suſſmilch, *who publiſhed two very elaborate pieces* * *on this ſubject at* Berlin, *in* 1742 *and* 1756.

(e)

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* Theſe books are written in the *German* language, and are entitled, *Gottliche Ordnung in denen Veranderungen des Menſchlichen Geſchlechts*, 8vo. and Got-

(e) *The Number of deaths for ſix years, or more, muſt be taken and added together; then the total divided by the Number of years, gives a medium for the annual Number of deaths.*

(f) *See* Suſſmilk, *quoted above.*

(g) *Hence it appears, that in the King of* Pruſſia's *whole dominions from the year 1750 to 1756, taking one year with another, the Number of births exceeded the Number of burials at leaſt by* 41,000.

CHAP. LXII.

Of the Means for rendering a country more Populous.

THE number of inhabitants, and their induſtry, conſtitute the power and wealth of a ſtate *(*a*)*. The Means for the Populouſneſs of a country are,

1. The encouragement of matrimony; which is the more neceſſary, ſince it appears from obſervation and experience, that not a fifth part of the inhabitants of a country enter into the married ſtate (b*)*.

Gottliche Ordnung in den Veranderungen des Menſchlichen Geſchlechts, beſonders in Tode, durch einige neue Beweis tumer beſtatigt. 4to.

2. Uſing proper Methods for preſerving the lives of infants in difficult births *(c)*, and in the moſt dangerous diſtempers to which they are liable (d*)*.

3. Many opportunities and encouragements for induſtry, and great moderation in the taxes payable by the common people (e).

4. Perfect freedom in the exerciſe of religion *(f)*.

5. An invitation to, and kind reception of foreigners (g).

6. Strictly to ſuppreſs lewdneſs and debauchery, and the immoderate uſe of ſtrong liquors (h). The fecundity of married perſons, in conſidering that of whole nations, is very different (i).

REMARKS.

(a) *Let it be ſuppoſed, that every ſubject, the rich, the middling ſort, and the poor, taken collectively, contributes yearly to the national revenue only three or four Rixdollars; This will amount to a very conſiderable ſum. But in a country where trade and manufactures flouriſh, the ſubject contributes a great deal more. The* *more numerous the ſubjects are, the ſtronger will be the army which the ſovereign can occaſionally raiſe in his dominions. The eighth part of the inhabitauts of any country can carry arms in caſes of neceſſity.* *See* Suſſmilch *mentioned above.*

(b) *Mr.* Suſſmilch *in* p. 23, 24. 75. *adduces inſtances of countries, where, out of* 53, 55, 59, *or* 60 *perſons, only one marries. The countries from which he brings theſe inſtances are Proteſtant ſtates; but in Popiſh countries where convents are numerous, the number of marriages muſt be fewer in proportion to the number of inhabitants. The want of proper Means of ſubſiſtence is the chief obſtruction to marriages.*

(c) *Conſequently, good ſeminaries for inſtructing midwives in their profeſſion are very ſerviceable to a ſtate.*

(d) *Theſe are principally the ſmall pox, and cutting the teeth. The havock which theſe diſtempers make among the younger part of the human ſpecies, Mr.* Suſſmilch *ſhews in a very convincing and affecting manner in* p. 52, 53, 56, 57.

(e) *Agriculture and the vintage employ more hands than feeding of cattle* (Chap.

XXII.) *but manufactures, commerce, and navigation employ a greater number ſtill. The common people under oppreſſive taxes and impoſts are deterred from marriage, and dread the charge of a family; which is the caſe in* France. *See* Dangueil, p. 13. *How the want of manufactures and trade and the heavy load of taxes have almoſt depopulated ſeveral provinces of Spain, may be ſeen in* Uſtariz's Theorie et Pratique du Commerce, p. 59.

(f) *How much the free exerciſe of religion contributes to the Populouſneſs of a country is evident from* Holland, *and the* Pruſſian *dominions; and, on the contrary,* France *is a melancholy inſtance how very detrimental religious perſecutions are to a ſtate.*

(g) Frederic William *King of* Pruſſia *ſet a glorious example in this particular; and the great increaſe of inhabitants, which he thereby procured to his country, has been of infinite advantage to it.*

(h) *See* Suſſmilch, p. 48. *and* Monteſquieu de l' Eſprit. des, loix, Tom. II. L. 23. Ch. 2.

(i) *In* Sweden *the proportion of children to every marriage is only as three or four*

four to one; but according to Mr. Suſſmilch'*s obſervations, in other countries the proportion amounts from three and a half, to five children to every married couple.*

CHAP. LXIII.

Of the Number of Souls in Europe.

EUROPE would be much more populous than it is at preſent, if it were not for the great number of its inhabitants which for many years paſt have emigrated, and ſtill continue to go in colonies to the other three parts of the world; eſpecially *America* (a). With regard to the number of inhabitants, there is a great difference between the various countries and ſtates of *Europe*. For ſome of them are pretty populous; others are very thinly inhabited (b); and all of them could maintain a much greater number. The number of inhabitants in the ſeveral kingdoms and ſtates of *Europe*, according to the moſt probable computation which has been hitherto made, is as follows.

Ruſſia contains about	30,000,000
Germany	24,000,000
Poland	22,000,000
France	20,000,000
Turkey in *Europe*	16,000,000
Hungary	10,000,000
Great Britain and *Ireland*	8,000,000
Italy	8,000,000
Spain	7,500,000
The *Netherlands*, and *Switzerland*	6,000,000
Denmark and *Norway*	2,500,000
Sweden	2,000,000
Portugal	2,000,000
The Kingdom of *Pruſſia*	600,000
The total	158,600,000 *

* M. *Deſlandes*'s Computation of the Inhabitants of *Europe* is as follows.

Spain *and* Portugal	6,000,000
France	20,000,000
Germany *and* Hungary	20,000,000
Netherlands, *namely, the* 17 *Provinces*	5,000,000
Sweden, Denmark, Norway, *and* Muſcovy	16,000,000
Italy, *and the adjacent Iſles*	11,000,000
England	8,000,000
Poland *and* Pruſſia	7,000,000
Turkey	16,000,000
Total	109,000,000

(a) *See* Monteſquieu de l' Eſprit des loix, Vol. II. L. XXIII.

(b) *This difference will be ſtill more viſible, if we compare this account with the extent of the reſpective countries in* § 17.

CHAP. LXIV.

Of the European *Languages.*

THE origin of *European* Languages is ſo intricate and obſcure, that, beſides the mixture of other Languages to be met with in each of them, it cannot be traced with any certainty. It is therefore ſufficient for my purpoſe, to point out the countries in which theſe ſeveral Languages are ſpoken by the inhabitants.

The *German* Tongue, being a capital Language, is ſpoke in *Germany*, *Alſace*, part of *Lorrain*, *Switzerland*, in the Kingdom and Dutchy of *Pruſſia*, *Courland*, *Livonia*, *Hungary* and *Tranſilvania*, part of *Denmark*, and in the *Netherlands*, but with a great variety of Dialects.

Denmark, *Sweden*, and *Norway*, have one common Language; but the dialects of it are very different. The dialect ſpoken in *Iceland*, and ſome pariſhes of *Thalland* in *Sweden*, differ entirely from the reſt. However, this is the old *Gothic* Language, to which all the Northern Languages, and conſequently all the Languages derived from the latter, owe their origin.

The *Finns*, *Laplanders*, and *Eſthonions* alſo ſpeak the ſame Language, which differs from the other Northern Tongues; it is not, however, without a little mixture of them.

The *Lettonians* in *Livonia* and *Courland*, and the *Lithuanians* in the great Dutchy of *Lithuania*, and in leſſer *Lithuania* which belongs to the Kingdom of *Pruſſia*, have alſo one common Language.

Ruſſia, *Hungary*, *Illyria*, *Bohemia*, *Moravia*, *Luſatia*, and part of *Stiria* and *Carniola*, ſpeak the *Sclavonic* dialects.

The *Poliſh* Language is alſo of *Sclavonic* origin, but very different from the foregoing.

The real *Hungarian* Tongue, which is ſpoken in *Hungary*, and *Tranſilvania*, has very little affinity with any other *European* Language.

The *Italian* and *Walachian* Languages are originally *Latin*, but with a mixture of ſeveral other Languages.

The *French* Tongue is alſo a capital Language, and is ſpoken not only in *France*, but alſo in *Savoy*, and part of *Switzerland*.

The *Spaniſh* and *Portugueſe* Languages, being only different dialects, are nearly the ſame.

The *Engliſh* have their own Language compounded of ſeveral others *. It is ſpoken in *Scotland*, and *Ireland*, together with the *Iriſh* Language, by the natives of thoſe countries.

The old *Gaulic* or *Britiſh* Language is ſtill ſpoken in the Principality of *Wales*, and in lower *Bretagne*. The old

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* The *French*, which the Author calls a capital Language, is no leſs compounded than the *Engliſh*. The ſame may be ſaid of the *Spaniſh*, and *Italian*; but yet they are much preferable to the *Teutonic*, and other northern Languages, both for copiouſneſs, harmony, and delicacy of expreſſion, in which laſt the *German* is very deficient.

Gaulic Language, or at leaſt a dialect of it, is ſtill ſpoken in *Biſcay*, *Guipuſcoa*, *Alava*, and part of *Navarre* *.

The *Turks* and *Tartars* uſe the ſame Language.

The modern *Greek* is ſpoken by the *Greeks* in the *Turkiſh* dominions.

CHAP. LXV.

Of the Religions profeſſed in Europe.

RELIGION is of real advantage to a ſtate (a). There are in *Europe*, (beſides the *Chriſtian*) the *Mahometan*, and *Jewiſh* Religion; and in ſome parts of the North are ſtill ſome remains of *Paganiſm*.

REMARK.

(a) *See* Monteſquieu's l'Eſprit des loix, Vol. III. L. 24. Chap. 2. Le Droit des

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* The old *Britiſh* Language is ſtill ſpoken in its purity in *Wales*, and a dialect of it was once ſpoken in *Cornwal*, and *Bretagne*. But whether it be the ſame with the Language of the antient *Gauls*, or that ſpoken in *Biſcay*, *Guipuſcoa*, *&c.* as the Author intimates, is a very dubious point. The Language of *Bretagne*, or *Armorican* Tongue, is not underſtood by the *Welch*.

Gens. par M. de Vattel, L. I. Chap. 12.

CHAP. LXVI.

Excellency of the Chriſtian *Religion, and the principal Sects into which it is divided.*

TO the Chriſtian Religion mankind owes a fixed political law in government, and a fixed law of nations between parties at war, for which benefits human nature can never ſufficiently expreſs its obligation (a). It is divided into five principal ſects or churches, namely, the *Romiſh*, the *Greek*, the *Lutheran*, the *Calviniſtical*, and the church of *England*. The three laſt ſects are in general called *Proteſtants*.

REMARK.

(a) See Monteſquieu de l' Eſprit des loix, Vol. III. L. 24. Chap. 3.

CHAP. LXVII.

Of the ROMAN *Catholic Church, or* POPERY.

POPERY is the only religion tolerated in *Spain*, and *Portugal* (a), in ſome provinces of *Switzerland* (b), in the *Auſtrian Netherlands*, and the ſtates of *Italy* (c); in *France* (d), *Poland* (e), *Hungary*, and *Hungarian Illyria* (f). In *Germany* (g), *Tranſilvania*, *Courland*, and in ſome Cantons of *Switzerland* (h), it is on the ſame footing with the Proteſtant religion. The *Romiſh* religion is likewiſe tolerated in the *United Provinces*, *Denmark*, *Pruſſia*, *Ruſſia*, *Turkey*, *&c.* (i). A great number of Papiſts are alſo tolerated in *Ireland*, and *England*, but are not allowed the public exerciſe of their religion (l). *Rome* is the place where Popery appears in its greateſt ſplendor; and the profeſſors of it are the moſt bigotted and zealous in *Portugal* and *Spain*.

REMARKS.

(a) *Thoſe countries, however, are not without great numbers of perſons who clandeſtinely profeſs the* Jewiſh *religion.*

(b) *Theſe are the ſeven cantons of* Lucern, Ury, Switz, Underwalden, Zug, Freyburg, *in the greateſt part of the canton of* Solothurn, *and in ſome diſtricts and places connected with theſe cantons.*

(c) *The inhabitants of* Italy *are all Papiſts, except a few* Waldenſes *who are ſtill remaining in the vallies of* Piedmont, *and ſome* Greeks *and* Jews, *who are tolerated in ſome parts of that country.*

(d) *Namely, ſince the year* 1685, *when all the edicts in favour of the Proteſtants were repealed; and ſince that time no other religion but the Popiſh has been tolerated by the Kings of* France, *excepting in* Alſatia. *But there are ſtill ſome millions of Proteſtants among the ſubjects of that monarch; and* Jews *in ſome parts of* France *are openly tolerated* *.

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* I believe the Author is miſtaken, for the *Jews* are openly tolerated only in the Pope's territories in *France*, namely, about *Avignion.* They have

(e) *By the conſtitution of* Poland, *Popery is declared to be the eſtabliſhed, and only orthodox, religion. The* Lutherans, Calviniſts, *and* Greeks, *are tolerated there, and are ſtiled* Diſſidentes. *There are alſo* Armenians, *and a great number of* Jews, *in* Poland.

(f) *In* Hungary *the Papiſts, though they are ſcarce the fourth part of the inhabitants, conſtitute the eſtabliſhed church. The* Proteſtants, Anabaptiſts, Greeks, *and* Jews, *being only tolerated in that country. In* Hungarian Illyria, *the* Romiſh *is the eſtabliſhed church, but the* Greek *religion is tolerated.*

(g) *Vide* Inſtrumentum pacis Oſnabrug. Art. V. §. 1.

(h) *Namely, in two cantons among the* Griſons, *and ſome diſtricts dependent on thoſe cantons.*

(i) *Namely, at* Conſtantinople, Galata, *and other places in* Turkey, *where the Papiſts have churches.*

have a ſynagogue at *Liſle*, a ſmall town about 5 or 6 leagues from that city, and wear yellow hats by way of diſtinction.

(k) *See* Albert'*s Letters on the State of Religion and the Sciences in* Great-Britain.

CHAP. LXVIII.

Of the GREEK Church.

THE *Greek* Church is the eſtabliſhed religion in *Ruſſia* (a). It is alſo freely exerciſed in the *Turkiſh* dominions, and is likewiſe tolerated in *Poland*, *Hungary*, *Tranſilvania*, and in the *Hungarian Illyria*. There are alſo great numbers of the *Greeks* in *Italy* (b), who have ſubmitted themſelves to the Pope, and are called *Unites*.

REMARKS.

(a) *A ſect, which is now pretty numerous, has ſeparated itſelf from the eſtabliſhed* Greek *church in* Ruſſia. *Theſe call themſelves* Starowerſki, i. e. Primitive; *but by the* Greek *church they are call'd* Roſkolniki, *or* Backſliders.

(b) *At* Leghorn, Rome, *and* Venice, *they are allowed churches for their worſhip.*

CHAP. LXIX.

Of the LUTHERAN Church.

LUTHERANISM is the eſtabliſhed religion of *Denmark, Norway* (a), *Sweden* (b), *Pruſſia* (c), *Livonia*, *Ingermania*, and the *Ruſſian* part of *Finland*. The *Lutherans* enjoy the ſame privileges as Papiſts in *Germany*, *Tranſilvania*, and *Courland* (d). They have the free exerciſe of their religion in the United Provinces (e), in *England* (f), *Ruſſia*, and the *Turkiſh* empire (g); but in *Hungary* (h), and *Poland* (i), *Lutheraniſm* is reſtrained, and daily more and more oppreſſed.

REMARKS.

(a) Lutheraniſm *is the only religion profeſſed in* Norway.

(b) *Since the Decree of Uniformity of Religion in* 1613, *the* Lutheran *is accounted the only eſtabliſhed church in* Sweden, *and* Finland; *however, in ſome places the* Engliſh, *and* Calviniſts *are allowed the public exerciſe of their religion.*

(c) *Several other religious ſects enjoy a perfect freedom in* Pruſſia.

(d) *When the* Courlanders *put themſelves under the protection of the Crown of* Poland, *they were all* Lutherans; *but at preſent Popery has gained a conſiderable footing there.*

(e) *In the towns of the* United Provinces, *the* Lutherans *enjoy a free exerciſe of their religion, and their places of public worſhip have all the appearance of churches.*

(f) *The* Lutherans *have three churches at* London. *See* Alberti's Letters on the preſent ſtate of Religion, and the Sciences in Great-Britain.

(g) *The* Lutherans *have churches at* Conſtantinople, *and at* Jaſſy *in* Moldavia.

(h) Lutheraniſm *was the eſtabliſhed church in* Hungary; *but is now only tolerated in that kingdom, tho' it is profeſs'd by the greateſt part of the inhabitants.*

(i) *At preſent* Lutheraniſm *is very much oppreſſed in* Poland.

CHAP.

CHAP. LXX.

Of CALVINISM.

CALVINISM is eſtabliſhed in the *United Provinces* (a), part of *Switzerland* (b), and in *Scotland* (c); and is on an equal footing with Popery and Lutheraniſm in *Germany* (d), and *Tranſilvania*, and with the former in ſome parts of *Switzerland* (e). It is tolerated in *England* (f), *Hungary*, *Poland*, *Courland*, *Denmark*, *Sweden*, and *Ruſſia*. The *Calviniſts* have the free exerciſe of their religion in *Pruſſia*; but are greatly oppreſſed in *France* *.

REMARKS.

(a) See the State of the United Netherlands. p. 25.

(b) *Namely, in four cantons, and ſome places in connection with them.*

(c) *Where it is called the Preſbyterian church. Vide* Alberti's Letters, &c.

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* They are not only oppreſſed, but perſecuted in an inhuman manner, eſpecially ſince the year 1744. See an Account of their Sufferings in a Pamphlet publiſhed in *French*, at *Amſterdam*, in 1751, and in *Engliſh* at *London*, in the year 1752.

(d) Vide Inſtrum. pacis Oſnabrug.

(e) *Namely, in two cantons among the* Griſons, *and ſome diſtricts in alliance with the cantons.*

(f) *Concerning its ſeveral names, together with the hiſtory of it in* England, *Vid.* Alberti's, &c.

CHAP. LXXI.

Of the CHURCH *of* ENGLAND.

THE Church of *England*, which is alſo ſtiled the Epiſcopal Church, is eſtabliſhed in *England* and *Ireland*, (a). The members of the *Engliſh* church who are ſettled in the *United Provinces* (b), *Sweden* (c), and *Ruſſia* (d), have the free exerciſe of their religion; and even at *Bordeaux*, and at *Legborn*, they are allowed to perform their worſhip in private.

REMARKS.

(a) *An account of the difference between the church of* England *and* Calviniſm *may be ſeen in* Alberti*'s Letters.*

(b) *The* Engliſh *have churches at* Amſterdam, *and* Rotterdam.

(c) *The King of* Sweden *by a royal edict permitted the free execiſe of religion to the* Engliſh.

(d) *There is an* Engliſh *congregation at* Peterſburg.

CHAP. LXXII.

Of MAHOMETISM.

MAHOMETISM is the eſtabliſhed religion throughout the *Turkiſh* Empire; and is likewiſe tolerated in *Ruſſia*, the great Dutchy of *Lithuania*, and at *Leghorn*.

CHAP. LXXIII.

Of JUDAISM.

JEWS are not permitted to live in *Portugal*, *Spain* (a), *Ruſſia*, *Sweden*, or *Norway*. But in the other *European* ſtates there are ſeveral millions of them, where they enjoy the public exerciſe of their religion, and in ſome parts of *Europe* they have great privileges. They are moſt numerous in *Poland*, and the great Dutchy of *Lithuania*.

REMARK.

(a) *However, as we have obſerved above,* p. 114, *there are ſtill great numbers who clandeſtinely profeſs the* Jewiſh *religion in thoſe countries.*

CHAP. LXXIV.

Of PAGANISM.

SOME of the *Laplanders*, and the *Samoieds*, who live in the moſt Northern parts of *Europe*, and many of the *Cheremiſſians*, and *Chuwaſhians*, in the government of *Niſhneinowgorod* in *Ruſſia* are ſtill Pagans; but miſſionaries are ſent among them, in order to convert them to Chriſtianity *.

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* Or rather to baptiſe them, which they perform by driving them into a lake or river like a herd of cattle, and hanging a croſs abont their necks, which is all that they know of Chriſtianity.

CHAP. LXXV.

Of Popery *and the* Proteſtant *Religion, conſidered according to the relation they bear to the civil Government.*

THAT the *Roman* catholic religion is better adapted to a monarchy, and the Proteſtant religion to a republic or free ſtate, as the celebrated *Monteſquieu* intimates (a), is in itſelf a groundleſs aſſertion, and likewiſe contrary to experience (b). It is certain that, in every reſpect, the Proteſtant religion is advantageous to the State, which is more than can be ſaid of the Popiſh, as will appear from the following particulars (c). The Popiſh religion does not allow ſovereigns to have the ſupreme authority over the church in their own dominions. On the contrary, it acknowledges the Pope as the abſolute Head of the church, and attributes to him the power of filling up, according to his pleaſure, all benefices and other eccleſiaſtical preferments in every ſtate (d). It injoins celibacy to the clergy; and its holy days are very numerous (e). The vaſt number (f), the wealth (g), and the magnificence (h) of its churches and convents is aſtoniſhing; which, however, inſiſt on an exemption from the uſual taxes paid by other ſubjects (i). The Popiſh clergy require great homage, and many immunities and privileges; they alſo aſſume a temporal juriſdiction, and have always at hand Excommunication, and, in ſome countries, the court of Inquiſition, as their ſpiritual weapons. Laſtly, very conſiderable ſums of money are annually ſent to *Rome* out of Popiſh countries, of which not one farthing ever returns from that inſatiable Gulph.

REMARKS.

(a) L'Eſprit des loix, Vol. III. L. 24. C. 5.

(b) Denmark, Norway, *and* Pruſſia, *are inſtances to the contrary.*

(c) *Theſe arguments, with ſome illuſtrations on each head, are to be found in* M. de Vattel's Droit. des Gens. 4to. à Londres, 1758. Tom. I. p. 136—151.

(d) *Though in this article there is no ſmall difference between Popiſh countries: the ſovereigns of ſome having, after great charge*

charge and trouble, ſecured to themſelves the diſpoſal of all, or moſt of the eccleſiaſtical preferments; yet in others they ſtill depend on the Pope's pleaſure.

(e) Monteſquieu's *Obſervations on Holy-days, in his* Eſprit des Loix, Vol. III. L. 24. Ch. 23. *are in general very juſt, though ſome of his thoughts on this ſubject are liable to exceptions. Some Popiſh ſtates begin to be ſenſible of the damages ariſing from a multiplicity of Holy-days, with regard to trade and induſtry, and have taken meaſures for leſſening the number of them.*

(f) *As a proof of what is here intimated, I ſhall inſert the number of convents in the principal Popiſh countries, which are as follows.*

In Portugal *the number of monaſteries and convents, of all denominations, are about*	900
In Spain	3169
In France	16,040
In Poland	724
Total	20,833 *

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* Query, whether the number of convents in *Germany*, and the *Netherlands*, does not exceed any one of the countries mentioned above?

In the Pontificate of Pope Paul IV. *and near the latter part of the ſixteenth century, the number of Popiſh churches in Chriſtendom amounted to* 288,000 *pariſh, and* 44,000 *conventual, churches; and this number is rather increaſed than diminiſhed ſince that time.*

(g) *The churches and convents are poſſeſſed of above two thirds of all the eſtates in* Poland.

In the Kingdom of Naples, *four fifths of the lands and wealth of the country are in their hands. The* 5*th Chapter of the* 25*th Book of* Monteſquieu*'s* Eſprit des Loix *treats of the limits, which the Legiſlature ought to fix to the increaſing opulence of the Popiſh clergy.*

(h) Monteſquieu*'s political Obſervations on Splendor and Magnificence in Divine Worſhip are extremely juſt. See* Tom. III. L. 25. Ch. 2—7.

(i) *In ſeveral Popiſh countries, particularly* France, *and the King of* Sardinia*'s dominions, the clergy have been ſubjected to the payment of the general taxes.*

CHAP. LXXVI.

Of MANUFACTURES.

MANUFACTURES, in a large ſenſe, include all works by which the products of nature are improved, and fitted for various uſes. But manufactures, in a more confined ſenſe, ſignify works made only by the hand and loom.

CHAP. LXXVII.

Diviſion of the Materials for Manufactures.

THE Materials for Manufactures are taken from the Vegetable, Animal, and Mineral Kingdoms, and may very properly be divided according to thoſe three branches or Kingdoms.

REMARK.

The Manufactures themſelves will likewiſe admit either of the ſame Diviſion as the Materials, or may be divided according to the various uſes they are put to.

CHAP. LXXVIII.

Of Raw Materials from the Vegetable *Kingdom.*

THE Vegetable Kingdom furniſhes the following Materials for manufactures: flax and hemp, (Ch. XXVIII.) tobacco-leaves, (Ch. XXIX.) madder and woad, (Ch. XXX.) kali or glaſſwort, (Ch. XXXII.) the ſugar cane, (Ch. XXXIII.) and cotton, (Ch. XXXIV.)

From flax is ſpun thread of ſeveral kinds, which is either worked, died, or bleached raw; and part of it is afterwards twiſted (a). The linens woven with thread are in general either coarſe, middling, fine, or very fine (b). Of flaxen threads of different colours are made ſpotted, chequered, ſtriped, flowered, and figured linen. Among theſe the principal ſorts are, huckaback, diaper, and damaſk (c); alſo painted, printed, glazed, and waxed linen, as buckram, ticking, canvas, oilſkin, *&c.* The quantity of linen and thread exported annually from *Germany* (d), amounts to ſeveral millions of rixdollars.

The former is ſent to moſt parts of *Europe*; and a great part of it, by the way of *Hamburg*, *Holland*, *England*, and *Spain*, to *America*, and likewiſe to the coaſts of *Africa*. Linen is alſo reckoned among the exports of *Switzerland*, the *Netherlands*, *Scotland*, *Ireland*, *France*, and *Ruſſia*.

Of linen rags Paper is made, of which there are ſeveral kinds (e).

Thread alſo ſerves for many uſes; namely, for tapes and laces of various ſorts. The latter are very different from each other both in pattern, fineneſs, and breadth. The fineſt and moſt beautiful bone-lace is made in the *Netherlands* (f), *France* (g), *Germany* (h), and *Denmark* (i); but the fiineſt Point, is made in *Italy* (k), *France*, *Brabant*, and *England*. At *Bruſſels* is made a kind of fine lace between theſe two ſorts.

Hemp is wrought into coarſe linen, eſpecially packing and ſail cloth, and is uſed by the rope-makers for twine, ropes, lines, cables, and other cordage, in ſome of which it is mixed with flax.

Tobacco-leaves are macerated ſeveral ways, and moiſtened with many kinds of juices. They are alſo baked, picked, ſpun, preſſed, cut, ground, *&c.* and thus are prepared for ſmoaking, and ſnuff (l). The former ſort is frequently chewed by ſoldiers and ſailors, and likewiſe makes a part of the *Materia Medica.*

Madder, and Woad are adapted for dying all ſorts of colours.

The Kali, or glaſs-work, is uſed in making the beſt flint glaſs, and likewiſe for bleaching linen.

The juice of the ſugar-cane, being firſt expreſſed by mills, is boiled in large cauldrons ſix or ſeven times ſucceſſively till it is inſpiſſated and clear. It is afterwards granulated by pouring lime-water on it, and then put into conical veſſels. Here the ſlimy droſs of it is drained off, and thus it is purified. In this ſtate it is called brown Moſcovade; all the other ſeveral kinds of ſugar are prepared by refining.

Cotton is often put raw between a double garment and quilted. It is likewiſe ſpun, and woven into ſtockings, handkerchiefs, waiſtcoats, dimitty, cotton, muſlin, *&c.*

REMARKS.

(a) *A ſurpriſing quantity of thread is ſpun in* Germany; *But it is no ſmall detriment to that country, that inſtead of being wrought into linen,* &c. *a great part of it is exported. From* Sileſia, *the Circle of* Weſtphalia, *the Electorate of* Brunſwick Lunenburg, *the Principality of* Halberſtadt *and other countries, many thouſand quintals are ſent every year into the* Netherlands. *The* Dutch *and* Flemings *have a method of improving and working it into a variety of manufactures, which they afterwards ſend into* Germany *and ſell there at a high rate.*

(b) *The fineſt linen wrought in* Europe *is made in the province of* Friezland, *and is uſually ſold for twelve* Holland *guilders * an ell. Lawn and Cambrick are made at* Valenciennes *in* French Hainault, *and in the provinces of* Cambray, Picardy, *and* Artois. *A great deal of fine linen made in* Germany, *eſpecially in* Sileſia, *after going through a* Dutch *bleaching, is ſold for* Holland *linen. The* Sileſian *lawn, which is alſo*

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* A *Holland* guilder is about 1*s.* 9*d.*

called Sheer *or* Clar, *is alſo a very fine ſort of linen.*

(c) *The moſt beautiful of theſe are made in* Luſatia, Sileſia, *and* Holland, *and ſerve for counterpanes, napkins, and table-cloths.*

(d) *Thoſe parts of* Germany, *which deal moſt in linen are* Sileſia, Luſatia, *the Electorates of* Saxony *and* Brunſwick Lunenberg, *ſeveral parts of* Weſtphalia, Swabia, Auſtria, *and ſome other diſtricts.*

(e) *In* Holland *and* France. *In the latter, the fineſt paper in* Europe *is made at* Auvergne, Angoumois, *and* Montargis *near* Paris.

(f) *Eſpecially in* Brabant.

(g) *Namely at* Valenciennes *in* French Flanders, *and at* Dieppe, Havre-de-Grace, *and* Honfleur, *in* Normandy.

(h) *As at* Liebenau *in the County of* Hoya, *at* Ananberg, Schneeberg *and other Parts of* Miſnia, *and likewiſe in thoſe Parts of* Bohemia *which border on* Saxony.

(i) *At* Tondern *in the Dutchy of* Sleſwick, *and the neighbouring territories.*

(k) *Namely, in the territories of* Venice *and* Milan.

(l) *Snuff is chiefly prepared from tobacco, either by raſping or grinding. The former is called* Rappé, *and the latter* Scotch, *&c.*

CHAP. LXXIX.

Of Raw Materials from the Mineral *Kingdom.*

THE raw materials which the Mineral kingdom furniſhes for manufactures are, clay, foſſile colours, vitreous ſtones *, foſſils compoſed of acid and neutral ſalts †, the ores of ſemi-metals, of the noble and common metals, and the metals extracted from thoſe ores.

Of Clay are made Tobacco pipes (a), mock and real porcelain, &c. (Ch. XXXV.)

From the coloured earths (b) many uſeful colours are prepared, (Ch. XXXVI.)

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* *Terrce vitreſcentes*, or ſtones which turn to glaſs, when melted in the fire.

† Such as are neither acid nor acaline, but between both; hence they are called *Mittelſalze* by the *Germans*.

Several vitreous ſtones, mixed with a lixivial Salt extracted from aſhes, furniſh materials for blown and plate-glaſs (c).

Blue or azure Vitriol is procured from Copper (d), green vitriol from Iron, white from Zink (e), and the common mixt vitriols from mixt colours (f).

Alum is procured, by boiling, from aluminous earth and a kind of Slate (g).

Salt-Petre derives its origin from a certain earth (h). Salt is made of different colours, and fineneſs (i).

Sulphur is purified different ways in ſulphur works (k).

Cinnabar is made of ſeven or eight parts of Mercury, and one of Sulphur. (Ch. XLII.) It is exported either whole, or ground with a little ſaffron, and then it is called Vermillion (l.)

Arſenic is likewiſe prepared for ſeveral uſes (m.)

From *Biſmuth*, eſpecially *Cobolt*, is prepared a blue colour called Smalt (n).

Gold (Ch. XLIV.) is uſed by goldſmiths, for jewels, toys, and gilding; and is beat into very thin leaves (o), which alſo ſerve for gilding (p); or it is drawn to a wire, ſome of which is afterwards flatted. But at preſent, gold-wire is made of ſilver ingots, which are ſo ſtrongly gilt with gold-leaf, that theſe ingots which at firſt are about an inch thick, after being drawn by a machine to the fineneſs of a hair, are in every part covered with gold (q). This gold-wire is either flatted by flatting mills, or uſed round as it was drawn. Both ſorts are ſpun upon ſilk thread, and uſed for gold-laces, fringes, taſſels, and embroidery.

Silver (Ch. XLV.) is uſed by Silverſmiths for plate, both plain and chaſed (r), and is alſo beat into thin leaves, which, like the gold-leaf, is uſed by Gilders. Silver is likewiſe drawn into thick or fine wire, which is uſed by various artificers; and, when it is flatted, is ſerviceable in ſeveral manufactures, as thoſe of galloons, laces, fringes, embroideries, and buttons.

Copper (Ch. XLVI.) is uſed by Copper-ſmiths and Braziers, for a variety of veſſels and utenſils. Several toys are made of it either plain, gilt, or ſilvered. The Engravers uſe it for copper-plates, on which they engrave and etch. For ſome uſes, it goes likewiſe through the hands of the Wire-drawers. By means of the additions mentioned in (Ch. XLVI.) braſs (s), Prince's metal, tombac, Pinchbeck, *&c.* are made of copper. By a mixture of braſs and pewter with copper, is produced that uſeful compoſition called bell-metal, of which are caſt bells, great guns, mortars, pillars, ſword hilts, *&c.*

Iron, and ſteel which is made from the former, (Ch. XLVII.) furniſh a vaſt variety of things, as great guns, cannon-balls, muſkets, piſtols, ſwords, pieces of armour, ſtoves, kettles, plough-ſhares, anchors, chains, knives and forks, razors, ſciſſars, *&c.* Iron is alſo drawn into wires (t), and beaten into thin plates. Of the latter, ſome are ſmeared over with tar, others tinned (u); and both theſe ſorts ſerve for various uſes.

The uſes of tin, pewter, and lead, have been hinted at above in (Ch. XLVIII. and XLIX.) But to be a little more particular; Tin and pewter ſerve for plates, diſhes, candleſticks, lamps, pots, baſons, and for tinning iron plates and copper veſſels. Of Pewter are alſo made bits for bridles, ſtirrups, ſpurs, organ-pipes, ſmall bells, *&c.*

Lead, next to Iron, is the moſt uſeful of all metals, being indiſpenſibly neceſſary to many artificers. For beſides the forementioned uſes, it is an ingredient in good Pewter, and ſerves to faſten braces and cramps in ſtone or wood. It is alſo pulveriſed, and made into white-lead, litharge, and red-lead.

REMARKS.

(a) *The* Dutch *Pipes are reckoned the beſt, eſpecially thoſe made at* Gouda.

(b) *Theſe foſſil colours are chiefly chalk, orpiment, gamboge, ochre of various kinds, lapis calaminaris, umber, borax,* French *chalk, black-lead, ſmalt, native cinnabar, and various earths or boles,* &c.

(c) *Glaſs is made of a mixture of ſand or pulverized flint, and a lixivial ſalt, fuſed together. It generally conſiſts of two thirds of the former, and one of the latter. Fine glaſs is made in* England, Germany, *and* France. *The places moſt famous for large and fine looking glaſſes, are the iſland of* Murano *near* Venice, *St.* Gobin *in* France, Southwark *and* Newcaſtle *in* England, and Senftenberg *in the Margravate of* Meiſſen *in* Germany.

(d) *The* Engliſh *vitriol has the preference, tho' as good a ſort is alſo made in* Germany; *it is uſed both by Apothecaries and Surgeons, but chiefly by the latter.*

(e) *Moſt of this ſort comes from* Goſſlar; *it is uſed by Painters,* &c. *for making a kind of varniſh or lacker, and likewiſe in medicine.*

(f) *Theſe commonly bear the name of the countries where they are made; as the* Roman, Hungarian, Spaniſh, Engliſh, Swediſh, Sileſian *vitriol,* &c. *Chymiſts, Apothecaries, and Phyſicians, have various ways of preparing vitriol, according to the various uſes it is deſigned for.*

(g) *Alum is prepared in* Germany, Sweden, England, Italy, *and other countries. Beſides the medical virtues of Alum, Tanners, artificers in metals, Bookbinders,* &c. *uſe it in their ſeveral trades.*

(h) *A great quantity of Salt-petre is prepared in* Germany, Poland, *and other countries; but the beſt is that brought from* Aſia, *in the* Eaſt-India *ſhips. Salt-petre, and vitriol are the ingredients in* Aqua fortis, *and a mixture of this with Sal-Ammoniac, or ſpirit of ſalt, produces* Aqua Regia. *Salt-petre, Sulphur, and Charcoal are the ingredients of which Gunpowder is made.*

(i) Germany *is remarkable for the number and richneſs of its Saline ſprings.*

(k) *The uſes of Sulphur are various. It is an ingredient in Gunpowder, and is uſed by Goldſmiths, Founders, and Sword-cutlers; by Statuaries and Engravers, for all kind of caſt figures and models; by Manufacturers, for whitening their Silk, Wool, and Stuffs. It is alſo uſeful in medicine.*

(l) *Both kinds are chiefly uſed in painting, enamelling, and in medicine. The factitious Cinnabar is purer than the native.*

(m) *The factitious Arſenics are, Arſenic properly ſo called, white or cryſtalline Arſenic vulgarly called Rats-bane, yellow Arſenic called Orpiment, red or Ruby Arſenic, or Sanderac. The ſecond ſort is uſed by Farriers, Painters, Glaſs-makers, Needle-makers, Chymiſts, and Apothecaries. It is alſo an ingredient in white metal and white Porcelain.*

(n) *Of Cobolt, after the ſulphureous particles have been exhaled by ignition, mixed with a certain portion of Sand and Pot-aſh, is made a dark-blue glaſs; which being pulverized, waſhed, and ſeparated according to its different fineneſs, is uſed in making Starch, painting in Water colours, and likewiſe painting on Porcelain, Earthen-ware,* &c.

(o) *An ounce of Gold may be beaten into* 1600 *leaves, each three inches ſquare; and the weight of a Ducat* * *yields about* 300. *Theſe leaves are put into a ſmall book of very thin paper, each containing twenty-five leaves, about three or four inches ſquare; the former weigh from five to ſix grains, and the latter about nine or ten grains.*

(p) *Gold-beaters divide beaten Gold into ſeveral claſſes. The beſt and fineſt the Sword-cutlers uſe, for gilding the hilts and blades of Swords; the ſecond ſort for arms, and ſteel-ware; the third is uſed for gilding books, gilt paper,* &c. *and the fourth claſs, the Apothecaries uſe for gilding pills,* &c.

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* A Ducat is about a Shilling leſs in value than half a Guinea.

(q) *The gilt Silver Ingots are drawn through above* 140 *different holes, and every time rubbed with wax, before they are reduced to a fine wire. There is alſo a Copper-wire drawn from Copper ingots, either gilt with Gold, or covered with Silver, which is afterwards flatted and ſpun for Tinſel laces,* &c. *this is called Lyons-wire, probably, becauſe it was invented at that city; but now it is made in* Germany *and ſeveral other places.*

(r) *Gold and Silver work is done in the beſt manner, and in the greateſt quantity at* Paris, *and* Augſburg.

(s) *Braſs is beaten into long plates or thin leaves, of which wire is made; which ſerves for Pins of ſeveral kinds, Bird-cages,* &c. See the following Remark.

(t) *Of Iron, Braſs, and Steel wire are made Needles for ſewing, embroidering, knitting,* &c. *and Pins, which make a conſiderable article in trade, as may be eaſily conceived from the univerſal conſumption of them. It is indeed amazing that they ſhould be ſold ſo exceeding cheap; ſince every Pin, from firſt to laſt, paſſes through the hands of no leſs than twenty-five different artificers. The beſt Needles, and*

and in the greateſt quantities, are made in England, Germany, *(particularly at* Schwabach *and* Nurenberg,) Holland, *and* France.

(u) *Great numbers of Tinned Iron-plates, or Latten, are made in* Germany, (*eſpecially in* Saxony,) *and ſent from* Leipſick *all over* Europe, *and even to the other parts of the world. A great quantity of theſe plates are made in* Sweden, *and lately in* France, *and* Spain.

CHAP. LXXX.

Of RAW MATERIALS *from the* Animal *Kingdom.*

THE Raw Materials derived from the Animal Kingdom, are, Hides, Skins, Wool, Hair, Silk, and Wax.

The Hides and Skins of Horſes, Aſſes, Horned cattle, Calves, Buffaloes, Sheep, Goats, Antelopes, Chamois, Stags, Deer, and Elks, (Ch. LI—LVI.) are made into ſeveral kinds of Leather (a), and prepared for various uſes (b).

Sheeps Wool (Ch. LIII.) is prepared by waſhing, beating, picking, carding, combing, and ſometimes likewiſe by dying; then ſpun, made into Yarn of ſeveral kinds, and woven into Cloths (c), Stuffs (d), Tapeſtry, Carpets (e), and Stockings (*f*); or knit (g) into Stockings, Caps, Waſtecoats, *&c.* Wool is alſo ſpun and mixed with Linen Thread, Silk, or Hair; and Hats are kewiſe made of Wool.

The uſes of Hair in manufactures are as different as the Hair itſelf. Of human Hair is made all kinds of woven and twiſted manufactures, eſpecially Wigs. Horſe Hair ſerves for Sieves, Coverings for Chairs, Hair-cloths for Stairs and Paſſages; likewiſe Buttons, Bruſhes, and a variety of other things. Camels Hair ſpun and twiſted (h) makes the moſt beautiful Camlets (i). It is likewiſe uſed in Stockings, and Wigs, and in the fineſt Velvets, Pluſhes, and Silk Stuffs. But Buttons and Twiſt, Laces, Girdles, Taſſels, and Fringes are not made of the fineſt Camel's Hair, it being of too high a price, but frequently of Goat's Hair. The Fur of Beavers, Rabbets, and Hares is uſed for fine Hats, Stockings, and Gloves.

Silk (Ch. LIX.) when wound from the coque or cod, is ſometimes ſpun, and twiſted (k); or woven into Ribbons either with, or without gold and ſilver wire, and into all ſorts of half Silk (l), or all Silk Stuffs, with or without gold and ſilver, plain, and brocade (m). It is alſo uſed for ſewing, embroidering, weaving Tapeſtry, *&c.* It is likewiſe knit into Stockings, Breeches, Caps, Waiſtcoats, and Gloves, *&c.* It is made, with bobbing, into Laces: Nets and Wadding are likewiſe made of Silk (n).

Wax, which is taken out of the Bee-hives, (Ch. LX.) is bleached (o), coloured, and uſed for Candles, for waxing Linen, for Wax-work or caſt and moulded Figures, and a variety of other uſes.

REMARKS.

(a) *The following are reckoned the fineſt ſorts of Leather:*

Corduan *or* Spaniſh *Leather, by the* French *call'd* Maroquin, *which is made of* *of Goat and Sheep-ſkins. There are two ſorts of it, namely, the rough and ſmooth.*

Yucté, *or* Ruſſia *leather; which is made from the hides of horned cattle; the red ſort, which comes from* Ruſſia, *is the beſt and moſt valuable.*

Calf-ſkin. This leather is made chiefly in Switzerland, England, Erlang, *and* Bautzen. *All dyed leathers are made of Calves ſkins.*

Parchment; which is made of the ſkins of Calves, Goats, Sheep, and horned cattle. That made in Holland, France, Dantzic, *and* Francfort, *is accounted the beſt ſort.*

Sole-leather. That of Liege *is the beſt, and is ſold at the higheſt price. Next to this is that made in* England, Hungary, Dantzic, Hamburg, Lunenburg, Saalfeldt, Zwickau, Maeſtricht, *&c.*

Morocco *leather; which is made of Calf and Goat ſkin.*

Shammy; which is made of the ſkins of Sheep, Goats, Calves, Deer and Elks, and likewiſe of the hides of Black cattle.

Shagreen; which is made of the hind part of Horſes and Aſſes hides.

Gilt leather is made of Sheeps ſkins.

(b) *Leather is uſed by Sadlers, Harneſs-makers, Shoe-makers, Book-binders, Trunk-makers, Glovers, Whip-makers, Watch-caſe-makers, Collar-makers,* &c.

(c) *Cloths are divided into,*

1. *Proper and complete Cloths, which are either of one colour or mixt; and theſe with regard to the fineneſs of the materials are divided into fine, middling, and coarſe Cloths. Of the fineſt ſort, thoſe made in* Spain *ſurpaſs all others; next to the* Spaniſh *are the* Engliſh *Cloths, then thoſe of* Holland, *then the* Brabant *Cloth; and laſtly, thoſe of other countries made after the* Spaniſh, Engliſh, *or* Dutch *manner.*

2. *Imperfect Cloths; as Bays, Flannel,* &c.

3. *Stuffs made to reſemble Cloth; as Sagathy, Cloth-Serge, Swans-ſkin, Duffil, Kerſey, Drugget,* &c.

(d) *Theſe woollen Stuffs, of which there is a prodigious variety, are thinner, lighter, and of a more flimſy texture, than Cloth. The different method of preparing the Yarn conſtitutes the difference between the various kinds of Stuffs, which are all manufactured after a particular manner.*

Some are made entirely of Sattin-yarn, which is ſpun from a very long kind of Wool that is ſtrong and ſmooth, and reſembles Silk. In other ſtuffs the warp is of ſattin-yarn, but the woof is of common yarn; others again are made only of twiſted worſted. Some of theſe Stuffs are fulled and manufactured in the ſame manner as Cloth, as I obſerved above; others are made without fulling: ſome have a plain and ſmooth ſurface; others are figured, ſtriped, or flowered. Some are of one colour; others of mixt colours. Theſe Stuffs are of various qualities, and differ in fineneſs, breadth, thickneſs, ſtrength, &c. *Of the great variety of them, I ſhall only ſpecify theſe few: Callimanco, Stuff-Damaſk, Camlet, Baragon, Serge, Shalloon, Crape, Ruſſel, Pluſh, Shag,* &c.

(e) *I here ſpeak of Tapeſtry made entirely of Wool. Thoſe of* Holland, *and* Brabant *are moſt in repute.*

(f) *Stockings are woven in a very curious machine made of poliſhed iron, which was invented in* England.

(g) *The knit Stockings are ſtronger than the woven, and conſequently are ſold at a higher price.*

(h) *The Hair, which in the ſpring of the year drops from the back, breaſt, and belly of Camels, is carefully preſerved, ſpun, and uſed in ſeveral manufactures. But Goats Hair, eſpecially that of the white Goats about* Angora *and* Begbazar *in* Natolia, *commonly paſſe's for Camels Hair. The word* Kamel, *which is the* Arabic *name of theſe* Aſiatic *Goats, has been confounded with the word Camel, and the Hair of this* Kamel *or Goat with the real Camels Hair. The Hair of the Kamel-goat is of a gloſſy white, and generally eight or nine inches long, and is always exported ready ſpun, but never raw.* Sweden *is the only country in* Europe *where there is a breed of* Angora *Goats, and conſequently, has this valuable Hair of its own growth.*

(i) *This ſtuff derives it name from the Camel. Camels-hair is wrought in* Aſia *without any mixture; but in* Europe *it is mixt with fine Wool or Silk. In ſome ſorts of Camlet the warp is of fine Wool, and the woof of Goats Hair; but in others the warp is partly Hair and partly Silk, and the woof all Silk. The* Bruſſels *Camlet*

let is the beſt in Europe; *but the* Engliſh, *at preſent, is very little inferior to it.*

(k) *This Silk ſerves for ſewing and embroidering, for fringe and taſſels.*

(l) *In theſe Silk is mixt with woollen and flaxen Thread, with or without figures, plain or raiſed.*

(m) *As Tiſſue or Cloth of Gold or Silver, Broccade, Velvet, Pluſh, Sattin, Silk-Damaſk, Taffety, Gauze, Tabby,* &c.

(n) *Silk-wadding is made uſe of for Night-gowns, Waiſt-coats, Night-caps, Counterpanes, being put between the outſide and the lining.*

(o) *This art was firſt invented by the* Venetians, *but afterwards practiſed by the* French, Engliſh, Dutch, *and* Germans.

CHAP. LXXXI.

Obſervation *on theſe Raw Materials.*

THE greater variety of theſe Raw Materials any country is poſſeſſed of, the greater advantage will accrue from them; and therefore ſuch a nation cannot be too attentive on the increaſe and improvement of theſe Raw Materials. Thoſe materials which a State has not, or cannot have, at home, muſt be procured, by commerce, in exchange for its own commodities. But nothing is more detrimental to a State, than to let other nations export its Materials Raw, and afterwards ſell them when wrought, to the firſt proprietors of the Materials, in ſeveral ſorts of manufactures *. For by this, not only the manufacturers wages are loſt, (which in goods made by the artificer greatly exceed the Materials, and in Wool and Silk manufactures is as four to one) but likewiſe all the other advantages accruing to a State from manufactures and mechanic trades, as ſhall be ſpecified hereafter.

CHAP. LXXXII.

Neceſſity *of* Manufactures, *and* Handicrafts.

MANUFACTURES and Handicrafts are partly neceſſary in themſelves, and partly from cuſtom, conveniency, and our manner of living; ſo that thoſe Manufactures and Trades, which are not abſolutely neceſſary to the ſupport of life, may be accounted neceſſary to a State.

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* *Spain* and *Portugal* ſuffer greatly by this overſight.

CHAP. LXXXIII.

Importance of Manufactures and Trades.

WITHOUT Manufactures and Handicrafts a State, however rich in natural commodities and raw materials, becomes poor, or at leaſt weak and impotent. On the other hand, Manufactures raiſe a ſtate, that was naturally poor, to opulence and power. In general, they ſave (a) and bring in (b) conſiderable ſums of money to a State. They employ and ſupport a great number of hands, and procure a flouriſhing and laſting Trade. They alſo contribute to increaſe and enrich the inhabitants, and conſequently to the aggrandiſement and power of a State (c). (Ch. LXII.)

REMARKS.

(a) *The rich, the middling ſort, the poor, adults, and children, being reckoned* *one with another; every individual, at the loweſt computation, conſumes annually to the amount of five Rixdollars of manufactured goods. Now if we apply this to any State, according to the ſuppoſed or certain number of its inhabitants, it will evidently appear what a large ſum of money a ſtate without manufactures muſt remit to other countries; and, on the other hand, what vaſt ſums it might ſpare by introducing manufactures at home.*

(b) *Of this* England, France, Holland, *and ſome other countries, are remarkable inſtances.*

(c) *The moſt effectual regulations ſhould be made for the ſupport of neceſſitous Artificers and Manufacturers in a time of ſcarcity, or when by war or any other cauſe the exportation of manufactures is prevented, and even the manufactures perhaps for ſome time put to a ſtand; that they may not ſtarve, or grow idle and diſpirited by want, or leave the country. The Government ſhould not allow the maſters in a dear time to lower the wages of their workmen; this being a great detriment, not only to individuals, but alſo to the whole community.*

CHAP. LXXXIV.

Of COMMERCE *in general.*

TRAFFICK is carried on by purchaſing or bartering various commodities. Theſe are chiefly the neceſſaries of life, materials for building, raw materials for manufactures and handicrafts, and the ſeveral ſorts of goods made of thoſe materials.

CHAP. LXXXV.

Of Foreign and Domeſtic Trade.

TRADE is divided into Domeſtic and Foreign. The former is carried on between the different provinces and inhabitants of one State, by means of pack-horſes, waggons, and ſledges; or by boats and barges on navigable rivers, canals, and lakes. Proper care ſhould be taken that a State be provided with theſe carriages in the beſt manner poſſible, (Ch. XX.) and likewiſe with coaſting veſſels on the ſea. In Domeſtic Trade a due proportion or equilibrium ſhould be preſerved between the ſeveral provinces of a State. Home Trade is of greater importance than Foreign Commerce. Foreign traffick is carried on with other nations, and in ſome countries, by means of the ſame carriages as the Domeſtic trade; but principally in large ſhips by ſea, which is the cheapeſt way, and of the greateſt extent. But that it may be truly advantageous to a State, it muſt be carried on in its own bottoms; the ſhips muſt be navigated by the natives of that State; and whether they be outward or homeward bound, they muſt always be provided with a cargo.

CHAP. LXXXVI.

Of ACTIVE TRADE.

WHEN any nation carries its commodities to another, and receives in return, beſides ſuch goods as it ſtands in need of, a part of its ſpecie, it becomes a gainer in trade. Hence it is ſaid to carry on an Active Trade; which enriches the one as much as it im-

impoveriſhes the other, ſince the balance of trade is in favour of the former.

CHAP. LXXXVII.

Of PASSIVE TRADE.

ON the other hand, when any nation exports to another, whoſe goods it ſtands in need of, not only the ſurplus of its natural commodities, but likewiſe makes up the deficiency in ready money, it is a loſer or carries on a Paſſive Trade; which muſt inſenſibly reduce it to poverty.

CHAP. LXXXVIII.

Of the Balance of Trade.

LASTLY, two nations in bartering only goods for goods, without the addition of any ſpecie on either ſide, are ſaid to preſerve an equal balance in Commerce.

CHAP. LXXXIX.

Of NAVIGATION.

AN extenſive and profitable commerce is not to be carried on without Navigation, (Ch. LXXXV.) The ſhips made uſe of in commerce are called merchant-men, or merchant-ſhips, and are of different burden, form, and conſtruction. Theſe ſhips are alſo ſometimes armed, either for defending themſelves from, or attacking, an enemy. The ſize of theſe ſhips is computed from the number of tons or laſts which conſtitutes their burden. A ton (a) is two thouſand pounds, or twenty quintals, each quintal being a hundred pounds, and a laſt is equal to two tons (b). The word Freight denotes both the lading, and the money contracted for with the maſter of the ſhip for the carriage of it. By the word Cargo is meant the goods with which a ſhip is freighted. A ſhip fully laden is ſaid to have its full freight; but when it wants any thing conſiderable of its freight, it is ſaid to have but half freight. The word Balaſt ſignifies ſtones, ſand, lead, or iron, which is put at the bottom of the ſhip, when it has not a proper freight, and conſequently is too light to keeping a ſteady courſe, and bear up againſt the wind. When a maſter of a ſhip, in order to complete his freight, takes on board goods belonging to different merchants, they are called piece-goods; and in the *Mediterranean* ſuch a one is ſaid to lade by the hundred.

REMARKS.

(a) *It is ſo called becauſe a tun filled with ſea-water weighs about two thouſand pounds; thus a tun here ſignifies a weight, and not a liquid meaſure containing four hogſheads.*

(b) *The word Laſt is uſed in ſeveral other ſignifications in trade*, viz.

1. *It denotes the largeſt ſhip-weight; but this is very different according to goods and places where they are loaded, and ſomtimes amounts to thirty, forty, or five and forty quintals.*

2. *It ſignifies alſo a certain meaſure of corn; and this is alſo ſmaller or larger, accord-*

according to the different countries where it is uſed *.

CHAP. XC.

TRADING COMPANIES.

THE deſign of Trading Companies is to undertake and carry on, by the joint contributions of ſeveral private perſons, a branch of trade which exceeds the abilities of a ſingle merchant. Theſe Companies, for certain conſiderations, are eſtabliſhed by a charter from the Sovereign for a limited term of years. The capital ſum thus employed in Trade is divided into ſhares, which are called Actions (a) †. The moſt powerful and celebrated of theſe trading ſocieties is the *Dutch Eaſt-India* Company.

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* Beſides the inſtances mentioned by the Author, we ſhall here inſert the following inſtances of the various acceptations of the word *Laſt*.

A Laſt of Meal 12 Barrels.
A Laſt of Herrings 20 Cades.
A Laſt of Stock-fiſh 1000 N°.
A Laſt of Flax or Feathers 17 Hdd.
A Laſt of Gunpowder 24 Barrels or 24000 *lb*.
A Laſt of Leather 20 Dickers.
A Laſt of Wool 12 Sacks.

† This term is uſed by the *French*, but is unknown in *England*.

REMARK.

(a) *The Bonds delivered by the trading Companies to the Contributors are likewiſe called Actions. Theſe are frequently tranſferred by the original proprietors to others, ſometimes with profit, and ſometimes with loſs; and the ſum is entered on the Company's books, againſt the name of the laſt purchaſer. The proprietor of an Action at a dividend of the profits of the Company receives his proportional ſhare. Now as this profit by viciſſitudes of affairs riſes and falls; ſo likewiſe the value of theſe Actions or ſhares likewiſe fluctuates.*

CHAP. XCI.

Of BANKS.

BANKS, or public Foundations, where merchants depoſit their money, either for ſecurity or conveniency, and ſave themſelves the trouble of payments, by giving a note on the

Bank which is charged to their capital, are very advantageous to trade (a). Banks receive only the current ſpecie of the State, which is therefore in *Germany* called Bank money. Theſe Banks are by ſome termed Exchange-Banks, and are very different from the Loan Banks (b). The latter are founded on the credit either of the Sovereign, the States of the country, large trading companies, or cities. Their ſtock conſiſts of ſums of money advanced by divers perſons, who receive intereſt for the ſame; and this money is either lent to others at a higher intereſt, and on ſufficient ſecurity, or employed ſome other way for the advantage of the founders of theſe Loan Banks. When they are in full credit, a Bank-note is as good as ready money. The Exchange and Loan Banks might be advantageouſly incorporated into one foundation.

REMARKS.

(a) *There are in* Europe *but four of theſe foundations which may properly be called public Banks, namely, thoſe of* Venice, Amſterdam, Nurenberg, *and*

Hamburg. *The Banks of* London, Genoa, Paris, Vienna, Stockholm, Copenhagen, Dantzick, *&c. differ in ſome reſpects from the former.*

(b) *Theſe are called* Lombordies, Montes Pietatis, *Charitable Corporations,* &c.

CHAP. XCII.

Commerce of the European *Nations with one another, and to the three other Parts of the Globe.*

THE *European* nations trade both among themſelves, and with the three other parts of the Globe (a). In theſe laſt, they either have colonies ſettled by compact with the Princes or States of thoſe countries, or claim ſuch a right by Conqueſt; and theſe plantations and colonies are either mediately, or immediately, ſubject to thoſe *European* States whoſe ſubjects carry on a reciprocal trade thither. In the former caſe, they are immediately governed by the trading Companies; but in the latter by the *European* ſovereigns, who, under certain reſtrictions, permit their ſubjects and others to carry on a trade by ſea to thoſe places. The *Europeans* export to the other parts of the globe Specie both in gold and ſilver, the natural commodities, manufactures, and wares of their reſpective countries; and in return, bring from thence gems, gold and ſilver, natural productions, raw materials for manufactures, manufactured goods, and ſometimes even the human ſpecies. Some of theſe goods and merchandize are brought to *Europe*, and conſumed there; and others are exported, or immediately carried from one of the other parts of the globe to another.

REMARK.

(a) *The* Europeans, *by their trade and navigation, open an intercourſe between the other parts of the world. The inhabitants of* Aſia, Africa, *and* America, *make no voyages to* Europe.

CHAP.

CHAP. XCIII.

COMMERCE *of the* Europeans *with the* Aſiatics.

OF all *European* nations the *Dutch* are the moſt powerful in *Aſia*. Next to the *Hollanders* are the *Engliſh*; then follow the *French*, the *Portugueſe*, *Spaniards*, and *Danes*. The ſubjects of *Sweden* and *Pruſſia* alſo trade to *Aſia*; but have no ſettlements there. The chief commodities which the *Europeans* import from *Aſia*, are, aloes (a), ambergriſe, arrack (b), biſmuth, bezoar ſtone, borax (c), coffee (d), raw cotton, cotton-yarn, ſhagreen (e), ginzeng, turkey-leather (f), precious ſtones (g), ivory, dying drugs, galangals (h), gauls; ſpices (i), namely, cinnamon (k), cardamoms (l), cloves (m), ginger (n), nutmegs, mace (o), and pepper (p); alſo gold (q), gums, indigo, camels hair (r), mohair (s), camphire (t), caſſia (u), copper (x), lackered or Japan ware (y), manna (z), myrrh (a), muſlin, muſk, opium, pearls (b), porcelain (c), rhubarb (d), ſago (e), ſalt-petre (f),

Japan-wood (g), handkerchiefs, raw ſilk, wrought ſilk, ſome of which is woven with gold and ſilver; tapeſtry and carpets (h), tea (i), Turkey yarn, frankincenſe (k), block tin, calico, and ſugar.

REMARKS.

(a) *Aloes is brought from* Arabia, *the iſland of* Zocotora, *and* China.

(b) *Arrack is a diſtilled ſpirit uſed for making punch.*

(c) *This is called nutaral borax or Tinkal, and conſiſts of a neutral ſalt. The common borax is made of it at* Venice, *and in* Holland. *Great quantities of it is uſed by aſſay-maſters, workers in gold and ſilver, and other artificers in metals; the price of it is daily riſing. It is brought from* Bengal, *and* Perſia. *Borax is alſo made at* Dreſden *in* Saxony.

(d) *From* Mocha *in* Arabia, *and the iſland of* Java.

(e) *From* Tauris *or* Tebritz *in* Perſia, *and* Aleppo *in* Syria.

(f) *From* Smyrna *and* Aleppo.

(g) *Of the* Aſiatic *gems, and the countries from whence they come, a particular* *account, tranſlated from the* French, *may be ſeen in the* Hamburg Magazine, Vol. XVIII. p. 500.

(h) *This root has a kind of aromatic ſmell, and a hot pungent taſte like pepper or ginger; and is uſed in cordials by Apothecaries and Diſtillers, as a ſtomachic; it is likewiſe uſed by Vinegar-brewers.*

(i) *The ſpice trade is almoſt entirely monopolized by the* Dutch; *and their* Eaſt India *Company, who make ſpices the chief article of their trade, have hitherto reaped immenſe profits by them.*

(k) *Cinnamon comes from the iſland of* Ceylon, *on the weſt and ſouth coaſt of which grows the tree which yields this valuable bark. The beſt cinnamon comes from the neighbourhood of* Negombo.

(l) *This ſeed comes from the coaſt of* Malabar, *and the iſlands of* Ceylon, *and* Java.

(m) *Chiefly from the iſland of* Amboyna, *which is one of the* Molucca's.

(n) *From* Java, *and* Macaſſar.

(o) *From the iſlands of* Banda *and* Amboyna; *mace is the ſecond coat or huſk of the nutmeg.*

(p) *From ſeveral parts of* Aſia, *eſpecially the* Malabar *coaſt, and the iſland of* Sumatra.

(q) *From* Malacca, Macaſſar *or* Celebes, Sumatra, *and other countries, but chiefly from* China, *where the price of an ounce of gold is nine* Spaniſh *Piaſters* *.

(r s) *See above* (Ch. LXXX, REM. h *and* i.

(t) *This is a gum or reſin, and comes from the camphire tree, which grows on the iſlands of* Sumatra, Macaſſar, Borneo, *and in other parts of* Aſia.

(u) *This is the fruit of a large tree, and has a cylindrical pod or cane about an inch thick, and a foot in length* †. *The pulp of it is uſed in medicine. The oriental caſſia was formerly found only in* Arabia; *but at preſent it grows alſo in other parts of* Aſia.

(x) *From* China *and* Japan; *the* Japan *copper is better than the* European.

(y) *From* Japan *and* China.

(z) *From* Arabia, Perſia, &c.

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* A *Spaniſh* Piaſter is equal to 3 s. and 7 d. ſterling.

† This is called Caſſia Fiſtula, to diſtinguiſh it from the Caſſia Lignea, or baſtard cinnamon.

(a) *From* Arabia, Surat, *and other parts of* Aſia.

(b) *The three chief Pearl fiſheries in* Aſia, *are,*

1. *That in the ſtreights between the Kingdom of* Madura, *and the iſland of* Ceylon, *along both coaſts.*

2. *That on the coaſt of* Japan.

3. *That in the* Perſian *gulf near the iſland* Bahrein, *and not far from* El-Catif.

(c) *From* China *and* Japan.

(d) *From* China, *where it grows in great plenty on the frontiers of* Tangut.

(e) *Sago, or Sagu, is procured from a tree of the ſame name. The trunk of it is covered with a bark about two inches thick; and this being very ſoft and pulpous is ground to a kind of flour, which is immediately baked like bread, or granulated. The latter is the ſago uſed in* Europe, *as a very nutritive food and eaſy of digeſtion. It comes from the* Molucca *iſlands and* Borneo.

(f) *The* Aſiatic *ſalt-petre is the beſt ſort, and comes from* Bengal, Surat, &c.

(g) *This wood is uſed for dying red, and is brought from* Siam *and* Macaſſar.

(h) *Theſe carpets come from* Perſia, Smyrna, *and other parts of* Aſia.

(i) *Tea is the produce of* China, *and from the different manner of drying it, is divided into two ſorts,* viz. *Green tea, and Bohea tea. Of the green kind are the* Hyſon, Imperial, *and the* Singlo; *and the bohea includes* Peko, Congo, *and* Souchong.

(k) *From* Mocha *and* Aleppo.

CHAP. XCIV.

COMMERCE *of the* Europeans *with the* Africans.

THE *Portugueſe*, *Spaniards*, *French*, *Engliſh*, *Hollanders*, and *Danes*, have ſeveral forts erected on the coaſt of *Africa* for the ſecurity and advancement of their trade in thoſe parts. The commodities which theſe nations bring from *Africa*, are oil, cotton, elephants teeth (a), gold in ingots (b) and gold-duſt (c), gum (d), hides (e), copper (f), ſeveral kinds of leather, almonds, Negro ſlaves (g), ſenna (h), wine (i), wool, ſugar, *&c.*

REMARKS.

(a) *They have greateſt trade for elephants teeth on that part of the coaſt of* Guinea, *which, from this trade, is called the* Tooth-coaſt; *and it is not uncommon for an elephant's tooth to weigh two hundred pounds.*

(b) *A maritime tract of land in* Guinea *is called the* Gold-coaſt, *and from* Akim *which lies on this coaſt, comes the fineſt Gold.*

(c) *Gold-duſt comes alſo from the* Gold-coaſt; *but great caution is required in this trade, by reaſon of the fraudulent practices of the Natives.*

(d) *From* Barbary, *and the country about the river* Senegal.

(e) *Theſe are dried hides with the hair on, which are afterwards tanned in* Europe.

(f) *Several tons of copper are annually exported from the Kingdoms of* Sus *and* Morocco.

(g) *In* Guinea *many thouſands of Negro ſlaves are purchaſed every year with brandy, iron, nails, linen, copper, various utenſils,* &c. *They are afterwards carried* *to* America, *where they fetch a good price. At preſent, a Negro from eighteen years of age to thirty coſts in* Guinea *about thirty or forty dollars, or more, and is ſold in* America *for a hundred, and ſometimes for a hundred and fifty dollars* *.

(h) *From* Nubia *and* Egypt.

(i) *From the* Canary *iſlands, the cape of* Good Hope, &c.

CHAP. XCV.

Of the Term Levant, *and the Signification of it as uſed by the* Europeans.

THE word *Levant* in general denotes countries lying towards the Eaſt. But the inhabitants of *Europe* agree in applying this name to certain countries bordering on the *Mediterranean*; however, the different nations of *Europe* vary in the extent of this term. By the *Levant*, the *Italians* mean all the countries which lye to the eaſt of *Italy* on the *Adriatic*, the *Archipelago*, and *Mediterranean* ſeas, from *Dalmatia* as far as the *Euphrates* in *Aſia*, and the

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* A Dollar is equal to 3s. 6d. Sterling.

Nile in *Africa* or *Egypt*, together with the iſlands included within that compaſs. The *French*, beſides *Italy*, include under this name the whole Northern coaſt of *Africa*; and the *Engliſh* and *Dutch* uſually, by the word *Levant*, underſtand all the countries round the coaſt of the *Mediterranean*, whether in *Europe*, *Aſia*, or *Africa*; but by the word *Levant*, in a more confined ſenſe, they mean only the countries which border on the *Archipelago* and moſt eaſtern part of the *Mediterranean*, from *Conſtantinople* on the north ſide, and *Alexandria* in *Egypt*, on the ſouth *, beſides which cities, *Smyrna*, *Scanderoon* or *Alexandretta*, and *Aleppo*, are the chief ſeats of commerce in the *Levant*. Hence it may be eaſily conceived what is meant by the *Levant* trade, which is very conſiderable.

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* The *Engliſh* generally uſe the Term *Levant* in this ſenſe. The word is originally *French*, and ſignifies the point of the compaſs where the ſun riſes.

CHAP. XCVI.

Of the COMMERCE *carried on by the* Europeans *to* America.

THIS vaſt part of the globe, as far as it has been diſcovered, is almoſt entirely brought under the dominion of the *Europeans*. The greateſt ſhare of it, at preſent, is in the hands of the *Spaniards*; and next to them the *Portugueſe*, the *Engliſh*, and *French*, have the moſt extenſive territories in *America*. The *Dutch*, and *Daniſh* poſſeſſions in this part of the world are but inconſiderable. Surpriſing quantities of valuable and neceſſary commodities are annually brought from *America* to *Europe*; as timber, cotton, cocao nuts (a), coffee (b), Quinquina or Jeſuits bark (c), cochineal (d), gems (e), iron, woods for dying (f), fiſh (g), gold (h), hides, indigo (i), ginger, copper, furs (k), pearls (l), pimento or Brazil pepper, rice, Roucou (m), ſarſaparilla (n), ſilver (o), ſpices, tobacco (p), vanilla (q), Vigonia wool (r), wax, and ſugar (s).

REMARKS.

(a) *This is a kind of nut, and is uſed as the chief ingredient in chocolate.*

(b) *The* Dutch *firſt planted the coffee berries in* America, *having brought them from* Aſia Surinam; *and as they throve there, the* French *followed their example, and after them, other nations. At preſent, the greateſt quantity of* Weſt-India *coffee grows in the* French *plantations.*

(c) *The* Bark *is of great efficacy in fevers, and is called the* Peruvian *bark; for the tree from which it is taken grows in* Peru.

(d) *Cochineal produces a moſt beautiful red colour, and is an inſect, which is only to be found in the Kingdom of* Mexico.

(e) *As diamonds and emeralds; but theſe are only in the hands of the* Spaniards, *and Portugueſe.*

(f) *Theſe are logwood, or campeachy wood, which is uſed in black and violet dyes, but entirely poſſeſſed by the* Spaniards; *and* Fernambuco *or* Brazil *wood, which is particularly uſed in dying red, and comes from* Brazil.

(g) *The greateſt fiſhery in* America *is that of cod, off* Cape Briton *and* Newfoundland.

(h) *From the* Spaniſh *dominions in* America; *but eſpecially from* Brazil, *which belongs to the* Portugueſe.

(i) *A blue dye procured from a plant, and made into hard lumps.*

(k) *As Beaver, Otter, Fox, Lynx, and Sable ſkins.*

(l) *Theſe are not ſo clear as the oriental pearls, but of a larger ſize.*

(m) *This is made of the ſeeds of the fruit of a certain ſhrub, and uſed in dying red, yellow, and other colours.*

(n) *This is a vegetable yielding a red colour for dying.*

(o) *Coined bullion and other ſilver, to the amount of ſeveral millions, is brought annually from the* Spaniſh *and* Portugueſe *ſettlements in* America.

(p) *Tobacco is brought chiefly from the* Brazils, Virginia, *and* Maryland.

(q) *This is a vegetable uſed as an ingredient in chocolate, in order to give it a pleaſant flavour, and more ſtrength. It is alſo mixt with tobacco to give it a fragrancy.*

(r) *This wool grows on a kind of wild goat, which is only to be found in* Peru.

(s) *The* French *carry on the greateſt trade in ſugars, and import ſeveral thouſand hogſheads annually from* America *to* Europe.

CHAP. XCVII.

Of the Polite ARTS.

IT is of great advantage, and a real ornament to a State, when the inhabitants love, encourage, and diligently cultivate the polite Arts, as painting, ſculpture, engraving, and architecture. In ſome *European* States theſe Arts are almoſt unknown; others have made ſome little progreſs in them; but in others they are encouraged, improved, and cultivated to the higheſt degree. It is worth while to examine into the ſtate of theſe Arts in every nation, of which a perfect knowledge is deſired. The Academies inſtituted in ſeveral countries contribute greatly to the improvement of the polite Arts.

CHAP. XCVIII.

Of the SCIENCES.

THE Sciences are ſtill of greater advantage to a State than the polite Arts; ſince they illume, refine, and improve the underſtanding. By theſe the morals of a nation are mended, and the Divine worſhip purified from error and ſuperſtition. The Sciences likewiſe contribute to the improvement and perfection of the polite arts, manufactures, mechanics, trade, and the other occupations of men. In order to find out the real ſtate of the Sciences in any country, we muſt make the following enquiries: Whether the inhabitants have a true taſte for the moſt uſeful and advantageous Sciences, and chiefly apply themſelves to them? whether there are many good foundations (a) for learning and the improvement of the Sciences in that country? whether the Sovereign and his miniſters of ſtate underſtand, encourage, and promote the Sciences? whether printing is carried to any degree of perfection there? whether the book-ſelling trade flouriſhes? and laſtly, what freedom in writing is allowed in that State?

REMARK.

(a) *Such as common Grammar-ſchools, Gymnaſia, Univerſities, Literary Societies, Academies of all kinds, particularly thoſe of the Sciences.*

CHAP. XCIX.

Of the Difference between Cities, Towns, and Villages.

MANUFACTUES, handicrafts, or mechanics, commerce, arts and ſciences, are properly the occupations of thoſe who live in cities (a). Agriculture and feeding of cattle, and other rural affairs, are the employment of thoſe who live in ſmall towns (b) and villages (c). However, experience ſhews, that the inhabitants of ſeveral ſmall cities, contrary to the deſign of them, are occupied in rural affairs; and that, on the contrary, in ſeveral ſmall towns and even villages, trade and manufactures are cultivated. This pernicious confuſion is no where more common than in *Germany* *. Cities enjoy their own laws and privileges, which are called Municipal laws. They are commonly governed by their own magiſtrates, and have their peculiar juriſdiction, which is either limited to petty cauſes, or includes likewiſe capital cauſes. Small towns and villages in many countries have the privilege of holding Fairs. Anciently it was cuſtomary to incloſe cities with walls, and to build towers or cut moats round them for their ſecurity. But at preſent, ſeveral old and new cities are open places; whereas many ſmall towns and villages in *Germany* are ſurrounded with walls and towers.

REMARKS.

(a) *In the old* German *Language a place ſurrounded with walls and towers was called a* Burg, *and the inhabitants*

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* I cannot ſee what ill conſequences can flow from this cuſtom; on the contrary, it is in many inſtances abſolutely neceſſary, for the ſubſiſtence of the inhabitants.

Burgher. *But towards the cloſe of the thirteenth Century, and eſpecially in the fourteenth and fifteenth, the word* Burg, *in the* German *Language came to ſignify only a fort or caſtle.*

A city is called Urbs *and* Civitas *in Latin.*

The Italians *call a city* Città, *particularly thoſe cities which are the Sees of Biſhops or Archbiſhops.*

The Spaniards *call ſuch a city* Ciudad, *and the* Portugueſe *term it* Cidade; *the* French *call it* Citè *and* Ville, *and the* Engliſh *a* City. *On the contrary, the* Spaniards *and* Italians *call a ſmall city* Villa, *and the* Engliſh *diſtinguiſh it by the name of* Town.

The Danes *and* Swedes *call a city* Stad; *the former likewiſe term it* Bye.

The Ruſſians, *and other nations who ſpeak the* Slavonic *language, call a city* Gorod.

(b) *What the* Germans *call* Flecken, *is a middling town between a city and a village. What is called a* Flecken, *in* Upper *and* Lower Saxony, *and* Weſtphalia *is known by the name of* Markt *or* Marktflecken, *in* Auſtria, Bavaria, Swabia, Franconia, Bohemia, &c. *In the* Netherlands *ſuch a town is called* Vlekken *and*

Vryheyd; *in* Denmark *it is called* Fleck; *in* France *it goes by the name of* Bourg, *and in* England *of a* Market-town *or* Borough. *The* Spaniards *and* Portugueſe *call it* Villa, *and the* Italians Caſtello. *In* Ruſſia *ſuch a town is termed* Sloboda Ujezdnya; *and in Latin it is called* Oppidum *and* Municipium, *and by the writers of the middle ages* Forum, *which word in its proper and ancient ſenſe ſignifies the* Territorium fori ſive urbis, aut cujuſque judicis. *What in ancient records was termed* Jus fori *or* forenſe, *has been ſince called* Weichbild *in* Saxony.

(c) *In* High-Germany *a large village is called* Dorf *or* Flecken, *and a ſmall village* Weiler. *The* Danes *call a village* Torp *and* Landſbye, *the* Swedes By; *and the* Ruſſians *term it* Derewnja *and* Selo, *and a ſmall village without a church* Selco. *In ſome countries, the houſes in villages are contiguous and regularly built as in cities, and are alſo tyled; in others they ſtand ſeparate, and every houſe is ſituated in the center of the woods, fields, and paſtures belonging to it.*

There are alſo ſome countries which have very few or no villages, properly ſo called,

called, but only ſcattered Farm-houſes. The fineſt villages in Europe *are in* North-Holland.

CHAP. C.

Obſervations *on the* Largeneſs *of* Cities.

THE Largeneſs of Cities may be determined either from their circumference, and the quantity of ground they take up; or from the number of houſes and inhabitants they contain (a). A City may be deemed large, and be called ſo relatively to other Cities of the ſame country, though it may be but a ſmall City in compariſon of thoſe in other countries. There are Cities which may be reckoned too large (b); others are very large, large, middling, or ſmall Cities. Among the Cities which are too large we may reckon *London* and *Paris*, which indeed reflect an air of grandeur on the kingdoms to which they belong, but at the ſame time are hurtful to them; for the mortality is very great in ſuch Cities, and the greateſt part of the wealth of the State flows thither from all other parts of the kingdom, and other places in a manner deſerted.

REMARKS.

(a) *On this difference depends the deciſion of the queſtion, whether* Paris *or* London *is the larger City? According to the firſt method of judging it muſt be given in favour of* Paris, *but according to the ſecond* London *muſt have the preference* *.

(b) *It is an inaccurate manner of ſpeaking in Geographers, to call a City large, ſmall, or middling in abſolute terms, without regard to the country to which they belong.*

CHAP. CI.

Obſervations *on the* Beauty *and* Elegance *of* Cities.

THE Beauty of a City is either ancient, or modern. The latter conſiſts in having ſtreets which are ſtrait, broad, well paved, clean, and well illuminated; in the ſymmetry and regularity of the houſes; in piazzas or ſquares, and pleaſant walks either in or near the city. Many States have no elegant cities in the modern taſte. A city may be beautiful or magnificent in reſpect to others in the ſame country, but at the ſame time neither elegant nor handſome, when compared with certain cities in other Kingdoms or States, nor relatively to the rules of true Beauty and Elegance. Many cities are in ſome parts adorned with handſome or magnificent buildings; but very few are elegantly built in every part.

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* *London* is much larger in every ſenſe, nor will it admit of any diſpute, ſince Mr. *Rocque* has ſhewn the proportion between *London* and *Paris* to be as 29 to 39 with regard to ground they take up; as to the number of houſes, the difference is ſtill greater in favour of *London*. If the bills of mortality were more accurate, the number of inhabitants would likewiſe appear to be greatly ſuperior in our metropolis.

CHAP. CII.

Of the Difference between States *in regard to the Number of Cities,* &c.

THERE is a great diſparity between the *European* States with regard to the Number of their cities, towns, and villages. In ſome States theſe are very numerous; in others they are leſs ſo, and in others again the Number of them is very inconſiderable. The greateſt Number of cities, towns, and villages is ſeen in *Germany*, *France*, the *Netherlands*, and *England*; and the Northern parts of *Europe* have the feweſt.

CHAP. CIII.

Of the ſeveral Diviſions *of* States.

STATES are divided various ways; but the principal Diviſions are the Geographical, the Political, the Juridical, the Eccleſiaſtical, and that according to the Revenues. I ſhall here only treat of the general and larger Diviſions, as they are moſt neceſſary to be known; but ſhall omit the ſmaller Diviſions, as they tend chiefly to the attainment of a minute and very circumſtantial knowledge of a State, which is not conſiſtent with my plan.

CHAP. CIV.

Of the Geographical Diviſion *of a* State.

THE Geographical Diviſion of a State is either natural, or arbitrary. The former is made partly according to the provinces of which a State is compoſed, and partly according to the ſituation of large mountains, woods, and rivers. The arbitrary Diviſion is made either according to the four principal parts of the world, or ſome other views and circumſtances. The natural is preferable to the arbitrary Diviſion.

CHAP. CV.

Of the Political Diviſion *of a* State.

THE Political Diviſion of a State into larger and ſmaller parts, is that by which the government of it is regulated. This ſometimes correſponds with the other Diviſions of a State; thus in *Denmark* and *Norway* it coincides with the Eccleſiaſtical Diviſion of thoſe kingdoms into Dioceſes.

CHAP. CVI.

Of the Juridical Diviſion.

THE Juridical Diviſion is made according to the Courts of Juſtice; and the inhabitants are divided according to the Juriſdiction to which they are ſubject. Thus the Juridical Diviſion of *France* is according to its twelve Parliaments and two Supreme Aſſemblies of the States; and the Kingdom of *Pruſſia* is divided into nine Colleges of Juſtice.

CHAP. CVII.

Of the Diviſion *of a* State *according to the* Revenues.

THIS Diviſion is made for the more expeditious and regular method of collecting the taxes and impoſts. In this reſpect, *France* is divided into thirty-two *Generalités* and *Intendances*. The Kingdom of *Pruſſia* is divided, according to the Revenues, into two *Military*

litary and *Demeſne-Chambers*; and the *Spaniſh* territories belonging to the Crown of *Caſtile*, into twenty-two Provinces.

CHAP. CVIII.

Of the Eccleſiaſtical Diviſion *of a* State:

THE Eccleſiaſtical is that Diviſion of a State, according to which the religious communities, foundations, and the clergy, are divided, for the better government and regulation of them. In thoſe States where Popery, or the *Greek* religion, is eſtabliſhed, the chief Eccleſiaſtical Diviſion is into Archbiſhopricks, which are called Eccleſiaſtical Provinces; and theſe are ſubdivided into Dioceſes, Archdeaconries, Deanries, and Pariſhes *. In *Lutheran* States, the Eccleſiaſtical Diviſion is made into Dioceſes, (as in *Denmark*, *Norway*, and *Sweden*,) or into Conſiſtories, general Superintendencies, Provoſtſhips, *&c.* and theſe are ſubdivided into Congregations or Pariſhes.

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* This Diviſion takes place in *England* and *Ireland*, tho' they are Proteſtant countries, which the Author has omitted.

CHAP. CIX.

Of the Chief Sources *of a* National Revenue.

THE internal government and ſupport of a State require great ſums of money, which ordinarily ariſe from four capital Sources.

The firſt conſiſts of Poſſeſſions immediately belonging either to the Sovereign or State, which are known by the name of Crown-lands, Demeſnes, *&c.* and theſe are either lands, or high Poſts (a). None of theſe are to be confounded with the Patrimonial poſſeſſions which belong to a Sovereign by inheritance, purchaſe, or any other method of acquiſition (b); which, however, the Sovereign, if he is ſo diſpoſed, may incorporate with the Crown-lands, or Demeſnes.

The ſecond principal Source of a National Revenue conſiſts of the Royalties, Rights and Prerogatives of the Sovereign; which were not granted him as his particular property, but for the ad-

advantage of the State in general, and in the management of which the national benefit is to be conſulted, and a Revenue to be raiſed from them for that purpoſe. Theſe conſiſt chiefly of the following articles.

1. Tolls, cuſtoms, and paſsports (c).

2. The profits ariſing from the Poſthouſes (d).

3. The Water-regalia (e).

4. The Foreſt-Regalia (f).

5. The hunting Royalties (g).

6. Mines and Salt-works (h).

7. Coinage of money (i).

The third chief Source of a National Revenue (k) is the Contributions of the ſubjects towards the general exigencies of the State; and theſe are a part of the profits ariſing from their particular eſtates, ſtock, or poſſeſſions, which, at the ſame time, conſtitute a part of the general wealth of a State. Theſe Contributions go under ſeveral names, as Aids, Taxes, Duties, Impoſts, *&c.* They are levied partly on immovables, or the profits ariſing from them (l); and partly on the perſons of the ſubjects, which is called a Poll-tax. In ſome countries duties are alſo paid for exerciſing certain trades, and laid on proviſions, ſalt, tobacco and other conſumptions, on the materials uſed in manufactures, and the goods made of ſuch materials; and theſe are known by the name either of Licences, Exciſe, Impoſts, or Gabels (m). There are alſo taxes laid on ſervants, ſtrong liquors, fleſh, cattle, plain and ſtamped paper, printed paper, windows, ſtocks, ſalaries, *&c.* But all theſe taxes do not take place in every State. Under this article may be included the taxes laid on coaches and chairs, and plate belonging to private perſons; and in ſome countries on apparel, *&c.* Theſe are the general and conſtant ſupplies of a State.

The fourth principal Source of the Revenues of a State is owing to the privileges and prerogatives of the Supreme Power, the Revenues ariſing from which are merely caſual. The chief of theſe are, the Sovereignty of a State over certain lands and manors in the country (n), the Adminiſtration of Juſtice (o), and the management of the Police (p).

When the ordinary Revenues do not anſwer the neceſſities of the State, extraordinary impoſitions are laid on the ſubject, which, in dangerous junctures and particular exigencies of the State, extend not only to the whole profit of their poſſeſſions, but ſometimes are laid even on a part of their ſubſtance. For the ſafety of the State, either the uſual taxes are increaſed, or new taxes are impoſed; and theſe are known by various names in different countries. But it frequently happens that theſe extraordinary taxes, when the particular circumſtances for which they were firſt impoſed no longer exiſt, are nevertheleſs continued, and turned into ordinary Revenues, to the great grievance, and ſometimes the ruin of the ſubject.

REMARKS.

(a) *For the management of large Demeſnes are required,*

1. *A Court, for the adminiſtration of Juſtice in the cities, towns, villages, and eſtates comprehended under them.*

2. *An Accomptants Office. But this is not neceſſary where the Crown-lands are farmed*

farmed out, as in ſome countries. For inſtance, the Pruſſian *Crown-lands have no ſuch office; and this method generally turns out better than when the Sovereign or State keep them in their own hands.*

(b) *The Sovereign can diſpoſe of theſe as he pleaſes; and in general they do not come under the cognizance of the Treaſury, but are managed by a particular office. However, they are ſometimes added to thoſe Demeſnes which are appropriated to the privy purſe of the Sovereign.*

(c) *Theſe Tolls,* &c. *ariſe from the Sovereign's prerogative over the public roads, and the power he has of laying a high or low duty on the baggage of travellers and other goods going out or coming in, in the manner which conduces moſt to the advantage of the State, by erecting Toll-houſes, and Turnpikes on the road,* &c. *But the misfortune is, that few States keep their roads in good repair, though they exact the above-mentioned tolls on carriers and travellers with rigour. In ſome countries theſe tolls,* &c. *are farmed; but this is a pernicious practice.*

(d) *This right is alſo grounded on the Sovereign's prerogative over the roads, and is neceſſary for carrying on trade and a correſpondence by letters.*

(e) *The Water-regalia is that part of the prerogative of the Sovereign, which relates to the diſpoſal of ſeaports, canals, lakes, and rivers, belonging to the State; and raiſing a Revenue from them, in a manner moſt conducive to the public welfare. Theſe Revenues ariſe from certain duties payable for Anchorage, and paſſing through canals and ſluices, or over bridges; and likewiſe for building of mills, fiſhing in the ſea, lakes, and rivers; alſo the profits of marine products, as Pearl, Coral, Amber,* &c. *and alſo from wrecks, gold-ſands, iſlands formed in the ſea, rivers and lakes, and lands which have been formerly overflowed.*

(f) *By virtue of this prerogative the Sovereign makes uſe of foreſts which is the general property of the State; and by the ſale of timber and wood for fuel, and killing of all kinds of deer and game, raiſes a Revenue for the uſe of the State, and enacts laws neceſſary for that purpoſe. He alſo exerciſes juriſdiction and a legiſlative* *power over foreſts and woods belonging to private perſons; and directs that they ſhall be uſed with œconomy, ſo as to endure to the general advantage and neceſſity of the country, and at the ſame time derives ſome advantages from them.*

(g) *The hunting Royalties include the granting of privileges for hunting; but the incomes ariſing from it are, in moſt countries, very inconſiderable.*

(h) *It is in the power of the Sovereign to cauſe mines of metals and foſſils to be wrought for the common advantage of the State, or to grant the privilege of working of them to private perſons under his controll, and thereby raiſe a Revenue, which principally conſiſts in the tenths of the profits; and theſe, in a country which affords ſeveral mines, are very conſiderable. But the profit which ariſes to the Sovereign from the ſale of metals is ſtill greater; for he uſually pays two, three, or even four Rixdollars for a Mark of ſilver, and from thirty to fifty Rixdollars for a Mark of gold, leſs than the real value of it. The produce of Salt-works is very conſiderable; but, in ſome countries, the extravagant price at which the ſubjects are obliged*

obliged to buy ſalt is a moſt iniquitous grievance.

(i) *The deſign of coining is to furniſh a State with a ſufficient quantity of ſpecie to carry on trade, and for the ſeveral uſes of ſociety. A Sovereign, by coining bad money, greatly injures his ſubjects, and at laſt hurts himſelf. The intrinſic value of large pieces of money ſhould be equal to their reputed value; but in the ſmaller coins this is not ſo neceſſary; ſo that ſome profit ſhould accrue to the State from the coinage of them.*

(k) *The numerous forces continually to be kept on foot, together with the increaſing ſplendor and magnificence of courts, occaſion the income of the Demeſnes and Royalties to fall ſhort of the national expences, ſo that other ſources are become neceſſary; and of this third Source of a National Revenue the produce is the greater, the more a State abounds with manufactures, handicrafts, and every branch of trade, and the more populous and opulent it becomes by thoſe means.*

(l) *If only the fifth or ſixth part of the produce be required, the ſubject is not aggrieved, and even the fourth part is tolerable;*

rable; but if a third be levied, it becomes an extreme hardſhip and oppreſſion.

(m) *Exciſe is either general, or particular. The former extends to all commodities indiſcriminately, which conduce either to the ſupport of life, or are uſed in trade: But the latter is confined to ſome particular goods and proviſions. An Exciſe is accounted by ſome the beſt ſort of tax, and by others the moſt pernicious.*

(n) *The Revenue of a State ariſing from fiefs conſiſts in the ſervices annexed to the tenures, and eſpecially military ſervice, which is uſually bought off for a ſum of money; fees or payments for all kinds of grants petitioned for by the vaſſals; and fines for offences againſt the tenure of the Fiefs. But the moſt profitable part of this branch of the Revenue is the diſcovery of Fiefs or Eſcheats, which, if no ſufficient cauſe be ſhewn to the contrary, are annexed to the Crown-lands for ever.*

(o) *The Revenues ariſing from hence are fees, fines, grants,* &c.

(p) *Theſe ariſe from the grants and confirmation of municipal and other privileges, charters for the erection of companies, and ratification of articles relating* *to commerce*, &c. *from fees for titles, dignities, poſts*, &c.

CHAP. CX.

Of the Military Force *of a* State.

A Well-diſciplined and ſufficient Military Force, kept under good regulations and in continual readineſs, is become neceſſary for the protection and defence of a State; and, even in times of peace, may ſeveral ways be employed to the advantage of a nation. But when, either from the example or ill deſigns of a dangerous neighbour, or from the martial diſpoſition of the Sovereign, the Military Force is augmented beyond the ability of the State, it then becomes a great detriment to it. In moſt of the States of *Europe* this article conſumes one half, and in ſome of them two thirds, of the national revenues. The moſt powerful of the *European* nations keep up both Land and Sea forces.

CHAP. CXI.

Of LAND FORCES.

IT is moſt advantageous to a State to have an army compoſed of its own ſubjects, ſince they may beſt be confided in upon any emergency. But when the State cannot ſupply a ſufficient number of Land forces, it is under a neceſſity of mixing foreigners with the natives.

A Land Army conſiſts of Cavalry and Infantry; and the former is generally divided into Cuiraſſiers and Dragoons, beſides which, ſeveral States have Huſſars and other Irregular light horſe. The whole body of the Cavalry ſhould conſtitute one third, or at leaſt, one fourth of the Army.

Land forces are divided into Regiments, which conſiſt of a certain number of men; and the Regiments of foot are ſubdivided into Battalions, and thoſe of the horſe into Squadrons.

In order to render an army uſeful to a State, it muſt be made expert in the

Pruſſian exerciſe, and kept in good diſcipline; every regiment muſt be complete and ready to march upon the firſt orders; and ſufficient regulations muſt be made for ſpeedy recruiting of it. The next eſſential thing to the utility of an army is the capacity, experience, and courage of the Commanders of it; eſpecially the Commander in chief. This poſt is beſt executed by the Sovereign himſelf, if he is poſſeſſed of the neceſſary qualifications for it. Few States have been able to render the national Militia in any great degree ſerviceable.

CHAP. CXII.

Of the Charges *of* Maintaining *an* Army.

AN Army, at the firſt formation of it, coſts immenſe ſums. For the advance money and complete equipment of every foot ſoldier at home is computed at about twenty-five * Rixdollars, of a Dragoon or Huſſar betwixt eighty-five and ninety Dollars, and of a Curaſſier no leſs than a hundred Dollars. But the Charge of raiſing men in foreign countries is ſtill greater, and eſpecially if they be tall and picked men. The Charge of a train of Artillery, and other neceſſaries for the field, likewiſe amounts to vaſt ſums. Hence it appears, that the expences of maintaining an Army are very great; however, it is far from being equal in all States, as will appear from the following ſketch.

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* A Rixdollar is equal to 3 s. 6 d. ſterling.

According to the public accounts, the Charge of maintaining one thouſand foot ſoldiers in times of peace is,

	Saxon Dollars.
To the King of *Spain* (a)	62,500
The Houſe of *Auſtria* (b)	50,000
The King of *Pruſſia* (c)	48,568
The King of *Denmark* (d)	41,868

The Charge of maintaining a thouſand horſe is,

To the King of *Spain*	171,875
To the Houſe of *Auſtria*	100,000
To the King of *Pruſſia*	57,450

The General's pay and allowance is not included in this account (e).

In the Treaty concluded between *England*, *France*, the Emperor, and *Holland*, in the year 1718, it was ſtipulated, That inſtead of a thouſand foot (when not actually furniſhed) each of thoſe States ſhould pay 10,000 Guilders * *per* month, and 30,000 Guilders in lieu of a thouſand horſe. The Charge of maintaining a thouſand foot in time of war was then computed at 120,000 Guilders, and a thouſand horſe 360,000 Guilders, a year. In the Treaty of Alliance concluded in 1756 between *France* and the Houſe of *Auſtria*, the Expence of keeping up a thouſand foot is computed at 8000 Guldens † *per menſem*, and about 96,000 Guldens *per annum*; and a thouſand horſe at 24,000 Florins a month, and 288,000 Florins or 192,000 Rixdollars ‡ a year.

But a military force is in no country maintained at leſs Charge than in *Ruſſia*, where a common ſoldier, for a whole year's ſubſiſtence money, receives but ten Rubels and 37 Copeics *, which make about thirteen Dollars.

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* A *Holland* guilder, which is here meant, is equal to 1 s. 9 d. ſterling.

† A Gulden is 2 s. 4 d. ſterling.

‡ A Rixdollar is 3 s. 6 d. ſterling.

(a) Uſtaritz *in his* Theorie et Pratique du Commerce et de la Marine, p. 268. *ſets down theſe ſums in* eſcudos de vellon, *which I have computed in* Saxon *money. But in the Infantry, he has, beſides the officers and ſoldiers pay, included the clathing, arms, ammunition-bread, recruiting money, hoſpital charges, and likewiſe the beds, candles, wood, and furniture in the Barracks. In the Expence of the Cavalry, he reckons the forage for the horſes and the remounting money, and likewiſe what he calls* Les frais de l'infanterie, *which I own I do not underſtand.*

(b) *In this computation of the Charge of the* Auſtrian *Cavalry, made by* M. Von Juſti, *ſeveral articles are brought into the account which are not included in the Article of the* Pruſſian *Cavalry; beſides, he ſeems to have only ſet down round ſums without any great exactneſs. According to his account, the Charge of maintaining an Army of ſixty thouſand men, conſiſting of forty thouſand foot and twenty thouſand horſe,*

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[*] About 2 l. 6 s. 7 d. ſterling.

horſe, the Generals included, will amount to four millions and a half of Dollars.

(c) *In the account printed in* 1753 *at* Amſterdam, (*at leaſt the name of that city is to be ſeen on the Title page,*) *the Annual Charge of maintaining a* Pruſſian *regiment conſiſting of* 1553 *men is eſtimated at* 72,853 *Dollars, of a regiment of Cuiraſſiers conſiſting of* 779 *men at* 43,617 *Dollars, and of a regiment of Dragoons conſiſting of* 1530 *men at* 83,262 *Dollars.*

(d) *In* Daniſh *money it amounts to* 33,495 *Dollars.*

(e) *According to* M. Von Juſti's *account, mentioned above, the Charge of a Staff-officer for* 30,000 *men, without any ſuperfluous Generals, is computed at* 200,000 *Rixdollars a year.*

CHAP. CXIII.

Of Military Regulations.

THE Military ſtate of a nation includes the following articles.

1. Forts and ſtrong towns. The utility of theſe is affirmed by ſome, and

denied by others. The moſt conſiderable fortifications are in the *Netherlands*.

2. Military ſchools for Cadets, which are ſeminaries for good officers.

3. Hoſpitals, and other inſtitutions, for the maintenance of invalids or diſabled ſoldiers.

CHAP. CXIV.

Of the Number *of* Regular Forces *kept up by the ſeveral* European *Powers.*

THE Regular Forces kept up by the ſeveral States of *Europe* in time of peace are, nearly, according to the following computation.

	Men.
The *Ottoman* Port	300,000
Ruſſia	250,000
The Houſe of *Auſtria*	200,000
France	160,000
The King of *Pruſſia*	146,000
The other *German* Electors, Princes, and Landgraves, about	130,000
Spain	70,000

Den-

Denmark	59,000
Sweden	48,000
Great Britain	30,000
The *United Provinces*	40,000
The King of the Two *Sicilies*	30,000
The Republic of *Venice*	28,000
Poland	24,000
The King of *Sardinia*	15,000
Portugal	14,000
The other *Italian* States	15,000
Total	1,559,000

CHAP. CXV.

Of the Naval Power *of* States.

THOSE nations, whoſe territories are either adjacent to the ſea or ſurrounded by it, are under a neceſſity of equipping a Naval force, partly for their own defence, and partly for the ſecurity of their trade and navigation. A Navy conſiſts of a number of ſhips provided with guns and men to act offenſively or defenſively, and therefore theſe are called Men of War. A conſiderable number of theſe ſhips of war conſtitute a Fleet, and a ſmaller number of them is called a Squadron. Ships of war, at ſea, anſwer the ſame end as forts do on land; but the former are much more ſerviceable to a State than the latter.

CHAP. CXVI.

Of the Neceſſaries *for the* Equipment *of a* NAVY.

IN *Europe* ſhips are generally built of oak, and the maſts are made of fir-tree. It is of very great advantage to a State to have within itſelf a ſufficient quantity of timber for ſhip building, and other materials for equipping a Navy, as metal, eſpecially iron for guns, bombs, balls, and anchors; gunpowder; hemp for ſailcloth and cordage; tar and pitch; and likewiſe ſkilful builders, and particularly a ſufficient number of able and expert ſailors. The laſt, together with the Marines and officers on board a Man of War, are called the ſhips company or Complement.

CHAP. CXVII.

Diviſion *and* Conſtruction *of* Ships *of* War.

THE difference of ſize in Ships of War, (which is computed according to the number of tons they can carry, C. LXXXIX.) and the number of decks and guns, conſtitute what is called their Rate (a). By an ordinance of the *French* King, the eſtabliſhment of the Navy in *France* is as follows.

A Ship of the	Tons.	Decks.		Guns.
Firſt Rate is from	1600 to 2200,	has 3 whole,	and carries from	70 to 120 *
Second	1300 to 1500	3		56 to 70
Third	800 to 1200	2		40 to 50
Fourth	500 to 700	2		40
Fifth	300 to 400	2		18 to 20

The *Engliſh* have a ſixth rate (b); and their Navy conſiſts of the following rates, which I have ſet down with the number of guns, and complement of men to every rate. An *Engliſh* ſhip of the

	Guns.		Men.
Firſt Rate carries from	96 to 100	and from	700 to 800
Second from	84 to 90	and from	524 to 640
Third from	64 to 80	and from	389 to 476
Fourth from	48 to 60	and from	226 to 346
Fifth from	26 to 44	and from	145 to 190
Sixth from	16 to 24	and from	50 to 100

* The Dimenſions of the *Royal Sovereign*, which was built at *Woolwich*, and lanched on *July* 25, 1701, are as follows,

The length of the Taffarel to the head	210 Feet.
Number of Guns	110.
Number of Men, full complement	1250.
Breadth	50 Feet.
Tuns Burden	2000.
The full Tread	158 Feet.
Draught of Water	22 Feet.
The Cloths	10,544 Yards.
The main Sail in length	54 Yards.
Ditto in depth	19 Feet 6 Inches.
The main Maſt in length	39 Feet.
The diameter of ditto	38 Inches.
Weight of the Anchor	82 *C.* 1 *q.* 14 *lb.*
Cable in length	200 Yards.
Diameter of ditto	22 Inches.

Men of War are alſo divided into Ships of the Line, which are ſuch as by their dimenſions and number of guns can be placed in the Line or order of battle; Frigates, Sloops, &c.

The number of guns in Ships of the Line is at leaſt forty-eight, but generally from fifty to a hundred; and in the Frigates, Sloops, &c. from forty-four down to ſix. The Complement (Ch. CXVI.) of men is determined by the number of guns and weight of metal, in every Ship of war.

In the Navy of *France*, to every gun that is a four-pounder they allow three men, namely, a gunner, a ſailor, and a marine.

To every ſix-pounder five men.

To every eight-pounder ſeven men.

To every twelve-pounder nine men.

To every eighteen-pounder eleven men.

To every 24-pounder thirteen men.

To every 36-pounder fifteen men.

Hence it appears that the complement of a Ship of ſixty guns, namely, of 26 eighteen-pounders, 26 twelve-pounders, and eight ſix-pounders, is 560 men. The *Engliſh* and *Dutch* reckon one man leſs than the *French* do to every gun; ſo that one of their ſixty gun Ships carries only 500 men (c). However, Ships of war ſeldom have their full Complement; and on the contrary, they ſometimes carry ſupernumerary men. I have endeavoured in the following Table, which I own to be imperfect, to exhibit at one view the different methods uſed by the *European* States in manning and equipping their Ships of war, according to their number of guns. It muſt be obſerved, that the ſervice performed by Ships carrying above eighty guns is not anſwerable to the expence of fitting them out, and the number of men required for their complement; for they are too heavy to tack about briſkly, and draw too much water to approach near the ſhore, or aſſiſt in deſcents.

Guns	French	Engliſh	Dutch	Spaniſh	Daniſh	Swediſh	Ruſſian
104	900 950						
102	850						
100	800	780					
96		680 710					
94			700				
92	675 750		650				
90	700 720	680 700 730	550				
88	660						
86	630						
84	600 630						
80	550	500 520 545		764			
74	470			650			

Guns

Guns	French	English	Dutch	Spanish	Danish	Swedish	Russian
72	490		400 430 450				
70	450	440 535	400	550 610			540
68							536
66	400	365 440					
64	350		325 350				462 466 518
62	350 380						456 462
60	350 380	365	350	400 484			
58	350 380						335
56	330 350	280		400			
54	300 330	280					
52			300				323 to 351
50	300	230 280		300 379			294 329

Guns

Guns	French	English	Dutch	Spanish	Danish	Swedish	Russia
48							326 331
46			300	300			
44				250 300			
40	200	190 280	180				
36	180		160				
32			160				184 198
30	170 190			200			
28	150						
24	120		120	195			179 182
22				100			
20	85	80		82 100 150			

[The following is an exact Liſt of the Navy of *Great Britain* taken this preſent year 1759, which will give the reader a juſt idea of our naval force, and correct the inaccuracies of the above Table with regard to the Complement, Rates, *&c.* of the *Britiſh* Ships of War.

		Number of Ships.
First Rates 100 Guns		5
Higheſt complement	850 Men.	
Loweſt	750	
Second Rates 90 Guns		10
Higheſt complement	750 Men.	
Loweſt	660	
Third Rates 80 and 74 Guns		13
Higheſt complement	650 Men.	
Loweſt	600	
Third Rates 70, 66, and 64 Guns		50
Higheſt complement	520 Men.	
Loweſt	460	
Fourth Rates 60 and 58 Guns		42
Higheſt complement	420 Men.	
Loweſt	380	
Fourth Rates 50 Guns		31
Higheſt complement	350 Men.	
Loweſt	280	
Fifth Rates 44 and 40 Guns		47
Higheſt complement	280 Men.	
Loweſt	220	
Sixth Rates 24 and 20 Guns		67
Higheſt complement	160 Men.	
Loweſt	140	
	Total	265

Three Bombs of 8 Swivel, and 14 Carriage Guns, 15 new Fire Ships, carrying 28 or 30 Guns on one Deck, 37 Sloops from 16 to 10 Guns, beſide Yachts, armed Veſſels, Store-ſhips, *&c.*]

REMARKS.

(a) *Vide* Dictionaire portatif de l' Ingenieur, par M. Belidor, à Paris, 1755. p. 327.

(b) *Vide* Chambers's Dictionary, *Article* Rate.

(c) *Vide* Theorie et pratique du Commerce et de la marine, par Geron. de Uſtaritz. p. 233, 234.

CHAP. CXVIII.

Obſervations *on a* Naval Force.

A Navy, both in the firſt formation (a) and the ſupport (b) of it, is much more chargeable than an army of land forces. It requires alſo ſpacious and ſafe harbours, and baſons for laying up ſhips, convenient docks for repairing them, and large magazines for Naval ſtores. *Great Britain* has, for a long time, kept up a Naval force greatly ſuperior to any other nation in the world *.

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* See the liſt of the *Britiſh* Navy above.

REMARKS.

(a) *I have now before me the account of the expence of building and fitting out the ſhips of war of ſixty and ſeventy guns, which lately were built and equipped in* Sweden. *The expence of a ſeventy gun ſhip amounted then to* 367,475 *ſilver Dollars* *, *which are equal to* 163,222 Saxon *Dollars; and that a ſixty gun ſhip to* 233,629 *ſilver Dollars, or* 103,817 Saxon *Dollars. This computation extends only to the ſhips, excluſive of the complement of men, ammunition, proviſion,* &c.

The expence of building an Engliſh *ſhip of war.*

Guns.		Pounds ſterling.
Of 100	*is about*	35,553 *
90		29,886
80		23,638
70		17,785
60		14,197
50		10,606
40		7558
30		5846
20		3710

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* A *Swediſh* ſilver Dollar is equal to 1 *s.* 6 *d.* ⅓. ſterling.

* The charges of building an *Engliſh* Man of War of the firſt rate, according to *Chamberlayne*, in-

The ammunition, proviſion, &c. *is not included in this account. In the year* 1734, *the* Engliſh *Navy conſiſted of* 209 *ſhips, the building of which coſt* 2,591,337 *pounds ſterling. See* Burchett'*s Preface to his Compleat Hiſtory of the moſt remarkable Tranſactions at Sea,* &c. Folio, London, 1720. Lediard'*s Naval Hiſtory,* Vol. I. Folio, London, 1734, *the Introduction.*

(b) *In* Spain *the charges of a man of war of ſixty guns, during a ſix months voyage amounts to* 69,000 Eſcudos de fellon, *or* 43,125 *Dollars, according to* M. Uſtritz; *whereas the charge of a fleet of thirty* Dutch *men of war for ſeven months, amounts only to* 3,132,740 Holland *Guilders.*

including the guns, tackle, and rigging, amount to 60,000 pounds ſterling; and thoſe of lower rates proportionably. In this account neither the victualling nor the compliment of men is included.

CHAP.

CHAP. CXIX.

Of the great Offices, *or* Colleges, *of a* State.

ALL the national affairs ſpecified in this treatiſe are managed by Offices or Boards, which have the care of each department. The higheſt of theſe, which is commonly called the Privy-Council, the Council of State, or Cabinet-Council, takes cognizance of, and regulates all the national affairs in general; and in this council the Sovereign uſually preſides. The national revenue is managed by the Treaſury or Board of the Finances. The Military department is under the care of the Admiralty. The ſeveral affairs relating to trade and commerce, are under the inſpection of the Board of Trade; all judicial affairs are decided by the Supreme Tribunal, or ſubordinate courts of Judicature,

ture. The concerns of the Church and Clergy are regulated by Convocations, Synods, and other aſſemblies of Eccleſiaſtics.

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